The Mining Journal

Established 1835 — Railway & Commercial Gazette

Vol. CCXLIV No. 6253 — LONDON, JUNE 24, 1955 — PRICE 8d.

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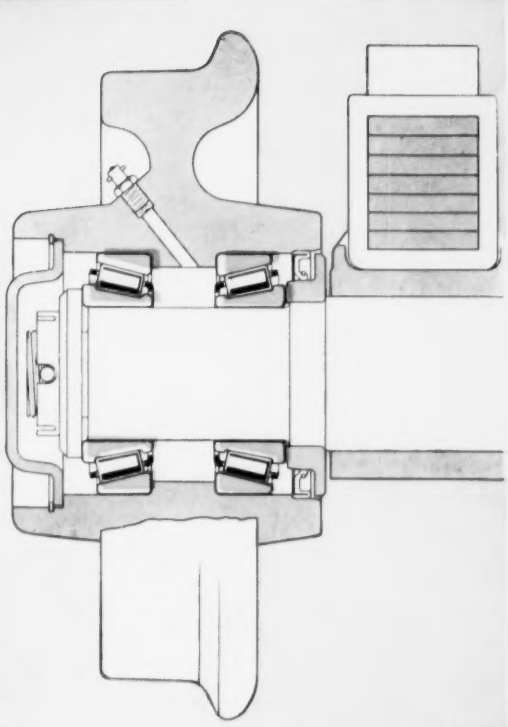

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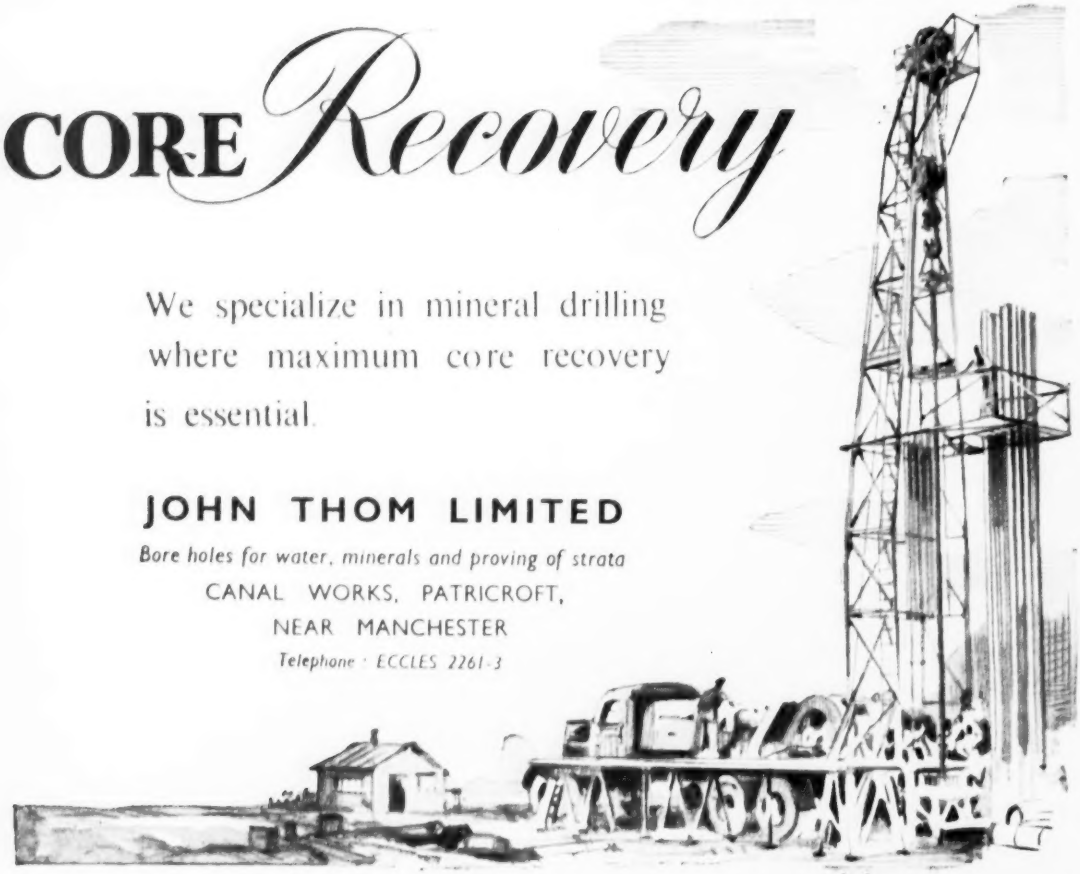

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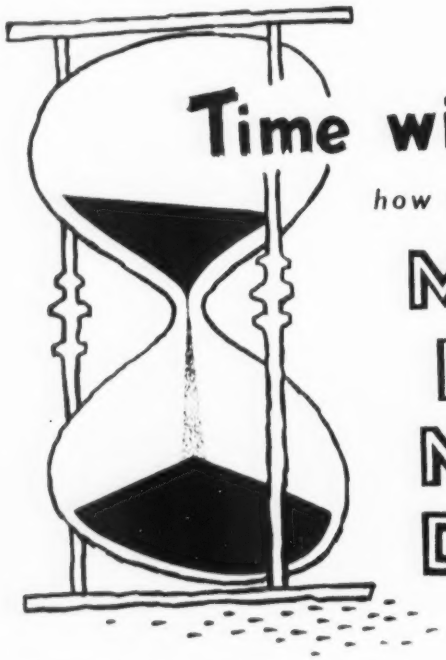

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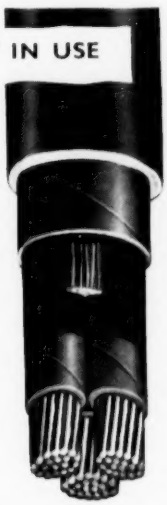

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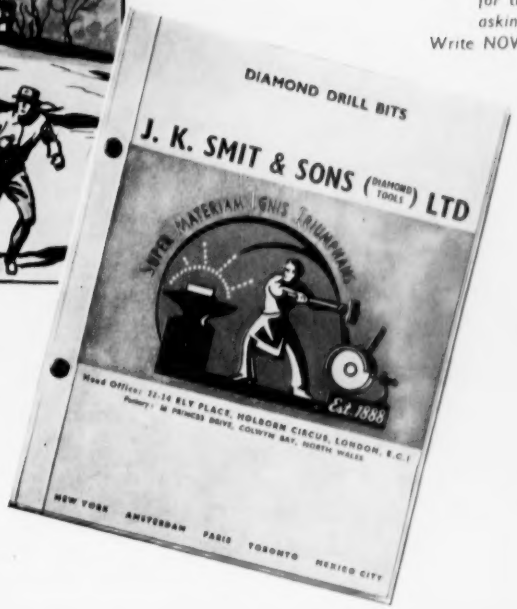
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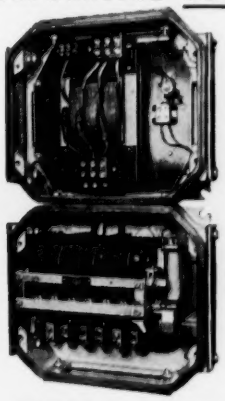

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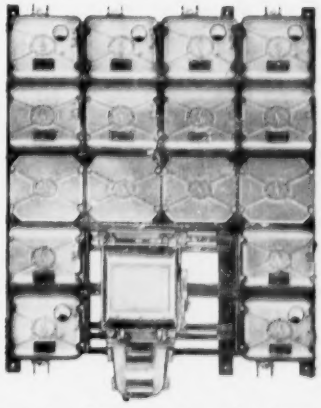

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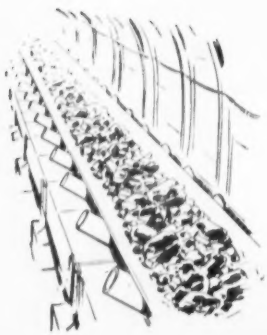

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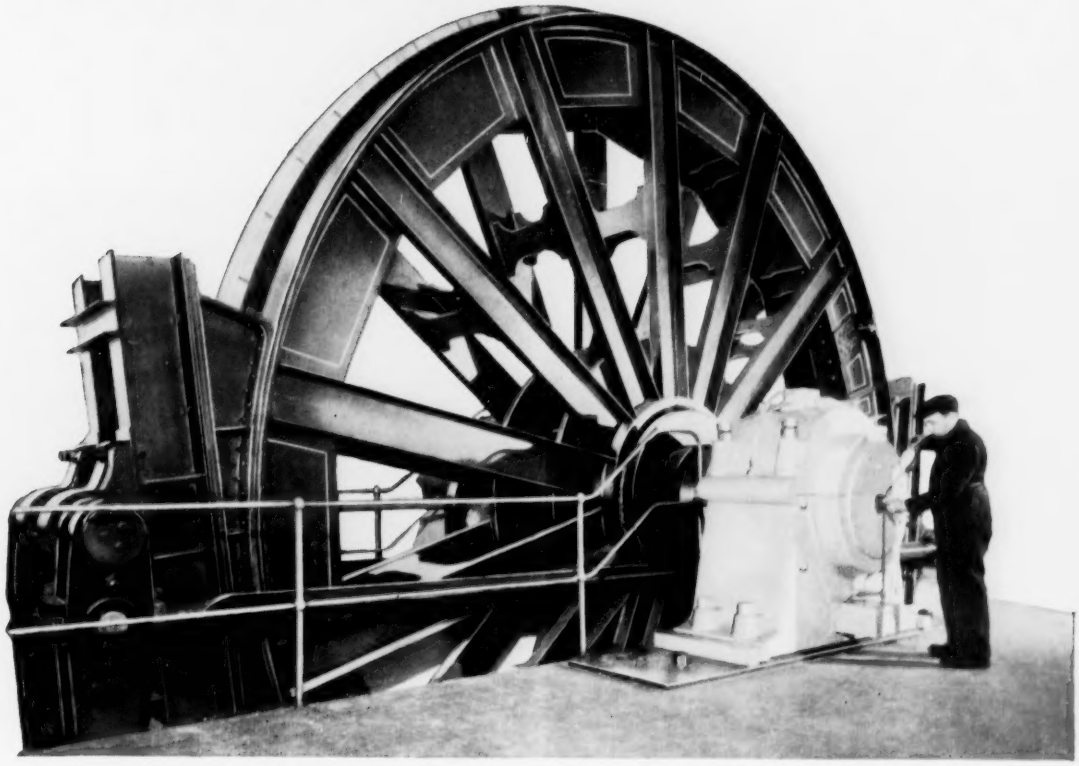

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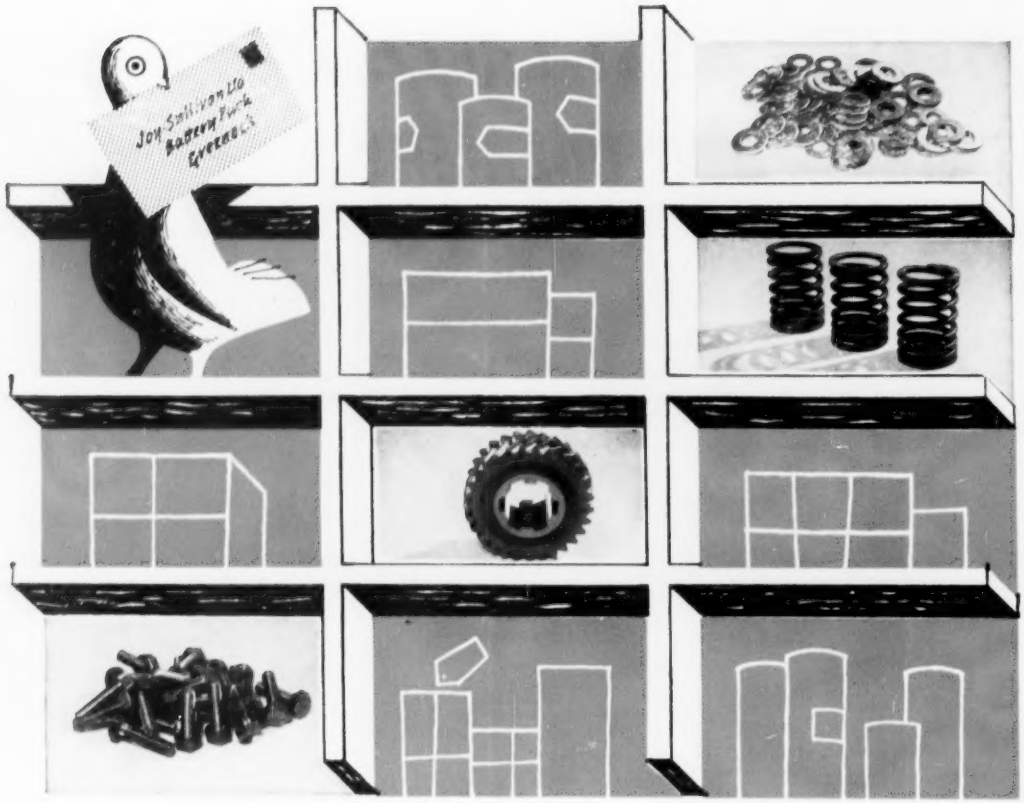

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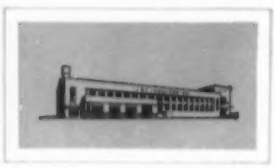

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The Mining Journal

Established 1835

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Published by The Mining Journal Ltd., at 15 Wilson Street, Moorgate, London, E.C.2. MONarch 2567 Subscription £2 per annum

NOTES AND COMMENTS

The National Coal Board Report and Accounts for 1954

From the profusion of statistical and accounting detail given in the annual report of the National Coal Board for the year 1954, one fact emerges starkly—Britain is rapidly losing the race between supply and demand of coal. The mines and opencast sites together produced during the year only 70,000 tons of coal more than in 1953, despite the fact that the year had an additional working day. The increase in internal demand for coal amounted to some 5,000,000 tons, much of this increase being attributable to a continuous rise in the country's industrial productivity. The power stations took 3,000,000 tons more than the previous year and consumed almost 40,000,000 tons.

To make good the deficit betwen output and requirements less coal was exported from the U.K. and much more was imported. The latter transaction involved the Board in a loss of £5,000,000.

Although the productivity of the face worker rose to a new high of 3.257 tons per manshift—11 per cent higher than the comparable figure for 1947, the first year of nationalization—any benefit from this increase was offset by a drop of 2,400 in the average number of faceworkers employed throughout the year. There was in addition a serious increase in the number of unofficial stoppages and restrictions of work, costing the country 1,500,000 tons of coal. This direct loss, however, does not give the true picture as however localized such stoppages may be, they undoubtedly adversely affect morale and hence output over a far wider field.

The report lays stress on the need for continued development of the industry but warns against the hope of quick results from the overall reconstruction project. By and large the section devoted to development and reconstruction does not hold out much hope for anything spectacular in the way of improved output in the near future and it is going to be extremely difficult to ensure that fuel supplies keep abreast of industrial growth, at least until atomic power is widely available.

The Board's first plans for long term production were prepared seven years ago, providing for 230-250,000,000 tons by 1965. Since that time there have been many changes in the forecasts for future demands and modifications have been necessitated. Some sacrifice of immediate output may be necessary if new capacity is to be made available and although every ton of coal is vital at the present time, reconstruction must not be delayed by pressure for immediate output. Moreover, the maximum use must be made of other fuels to fill the gap caused by a coal shortage, at least until such time as either the Board's long term plans mature or the Government's Atomic Energy Programme is carried through.

What of the alternative fuels? Oil is being increasingly used on the railways and in industry, but unfortunately the time involved in a major switch over from solid fuels to liquid militates against oil being considered as a speedy solution to the problem. On the other hand, as discussed in *The Mining Journal*, February 18, 1955, there is an abundance of natural gas flowing to waste in the world's oilfields. Although the possibilities of large-scale utilization of natural gas are not mentioned in the report, it appears that the shipping of frozen gas may well afford a cheap means of supplementing Britain's fuel requirements. In Saudi Arabia alone the equivalent of 4,000,000 tons of coal per year is being discharged to waste in the form of natural gas. Compared with the time taken for underground development on a national scale the Morrison Plan for shipping frozen gas could be fairly quickly put into operation so saving some of the 27,000,000 tons/year currently sent to the gas undertakings.

Manpower Shortages Hamper S.A. Development

The customary broad view taken in the annual statement to shareholders of the Anglo American Corporation by Sir Ernest Oppenheimer of the economic and social conditions affecting the countries in which the corporation operates has for many years resulted in its being one of the most eagerly awaited periodical documents on the progress of the mining industry in those countries. This statement has thus come to be regarded as being of a great deal more importance than purely that of a chairman addressing his shareholders and the views expressed, particularly on the Union of South Africa—by a man who so aptly symbolizes the growth of that country—embrace many and diverse prob-

lems not necessarily intimately connected with the business of gold mining.

Sir Ernest's review of the past year, reported in full on page 730 of this issue has been mainly directed towards the discussion of three separate aspects, falls under three headings; financial, technical and human. As regards technical considerations, however, there would appear to be few problems which will confront the Corporation within the next few years that cannot be faced with complete confidence. The difficulties inherent in opening up the new Orange Free State field are gradually being overcome, while in the diamond and copper fields, and particularly at the Wankie Colliery, the Corporation has entered a period of great expansion now well advanced towards completion. There will, of course, always be technical improvements and construction will continue as far into the future as can be seen.

It is in the human and social problems of South Africa that Sir Ernest sees the mining industry's most difficult and serious obstacles and between this sphere and that of finance there would appear to be a measure of common ground. Indeed, the grave shortage of European manpower in the Union which is seriously restricting the economic expansion of the country cannot be entirely disassociated from the inaction which has recently been a keynote of the Kaffir stock market, and although provision of finance for the Corporation's post-war expansion has been virtually completed, there is no doubt that South Africa must, if it continues on its present tack, eventually pay the price for its extreme political ideology through a flight of capital from the country. Should this be the case the losses which would be incurred through unexploited wealth need no emphasis. Just as the existence of a tense political situation comprises a most adverse consideration in the mind of any potential emigrant to the Union of South Africa, investors have been discouraged by recent juggling with the constitution of the country together with any lack of cohesive resistance from the opposition party.

Be that as it may, the lack of qualified personnel in both the federated territories of Rhodesia and in the Union is being tackled aggressively. In this respect the mining industry is offering training facilities even to a university degree standard in its effort to staff its enterprises. To assist in recruiting a party of some 20 educationalists were recently brought to Southern Africa from Great Britain for the purpose of giving them an insight into the mining industry and to enable them to assess for themselves the attractions of mining as a career. Free university training is being offered to suitable candidates. But these efforts are not confined to Great Britain and technical officers have recently been recruited from Scandinavia, Australia, Switzerland and Canada.

That Sir Ernest Oppenheimer sincerely believes the future holds a bright promise for South Africa has been only too apparent in the past for any sense of foreboding to be read into his assessment of the adverse factors at present besetting the Union. This is the time at which, despite recurrent constitutional crises, the dark moments of the present must not be allowed to overshadow the possibilities of the future. Emphasizing this outlook his reference to the Anglo American Corporation's exploration programme confirms the progressive course which continues to be followed. These operations are now conducted by three separate operating companies covering the Union of South Africa, South West Africa, the East African and Central African territories, Southern Rhodesia and Nyasaland. Of particular interest was Sir Ernest's reference to the newly formed Chartered Exploration in which Anglo American, The British South Africa Company and New Consolidated Goldfields have participations. This company has obtained a concession over considerable areas in Northern Rhodesia amounting to some 100,000 square miles and will search intensively for all minerals including those of a radioactive nature. Geological work is shortly to start under the technical direction of Anglo American Corporation. Besides this, exploration plans include a considerable programme of prospecting for the whole of Southern Africa, which will not merely cover areas where concessions or exclusive prospecting rights are held. No expense is being spared in the extensive research of these areas.

U.K. and U.S. obtain option to buy 90 per cent of Belgian Congo uranium ore

Under a new 10 year Belgian-U.S. uranium agreement, made known at the beginning of this week, the United Kingdom and the United States will have the right to purchase up to 90 per cent of the Belgian Congo's uranium ore production over the next two years.

This agreement, signed in Washington last week, replaces the secret war-time arrangements between Belgium and the joint Anglo American Purchasing Agency which purchased the whole of the uranium production from the Congo for war-time purposes.

The present two year option on 90 per cent of the Belgian Congo's output will be lowered to 75 per cent during the years 1958 to 1960. Thereafter, purchasing rights on the Congo's uranium ore will be a matter of agreement between the U.S.A. and Belgium.

In return for Belgium's "unique contribution to western defence" by her war-time and current uranium supplies, the U.S. is to sell Belgium as much enriched uranium (Isotope U.—235) as she can to meet Belgian needs for the peaceful application of nuclear energy and to supply the technical information required for that purpose. In this connection the agreement provides that the Belgian government will be kept informed of how the Belgian Congo uranium is to be allocated as between the U.K. and the United States.

The United States Atomic Energy Commission will give Belgium all classified information necessary to allow her to build and operate a reactor using heterogenic thermic neutrons. Classified information will also be given to Belgium concerning the types of reactors to be used in submarines, ships and planes when the U.S. Atomic Energy Commission considers that such information could be used for peaceful purposes.

On the other hand Belgium has agreed not to sell nuclear materials produced in her territories to countries other than the U.K. and the United States unless and until an assurance has been given that these materials will not be used for military purposes. Nor will Belgium have the right to transfer any material equipment or apparatus received under the heading "Restricted Data" by the United States to third parties unless so authorized by the U.S. government.

Thorium and Uranium in Brazil

Professor Costa Ribeiro, late Scientific Director of the National Research Council (CNP), said recently that Bazil is perhaps the only nation to possess appreciable reserves of both thorium and uranium. Intensive prospecting has revealed important deposits of uraniferous minerals, especially in Minas Geraes. The tin-tantalum-uraniferous reserves in the pegmatites of Sao Joao del Rei and at Volta Grande, on Rio das Mortes, may well prove to be the most valuable in the world. A significant feature of the Volta Grande pegmatites is the high percentage of spodumene, which make it Brazil's most important lithium deposit, with reserves of over 500,000 tons of lithium oxide.

Hindrances to Mining Expansion in E. Africa

(By Our Own Correspondent)

Dar es Salaam, June 15.

A live, modern mining industry requires a constant flow of materials and spares. A mine storekeeper once described the shaft of a mine as the mouth of a great, voracious animal devouring enormous quantities of materials in exchange for which it vomited up a few miserable ounces of gold. Without those materials, however, the ounces would not materialize.

The greatest hindrances to the rapid development of mining in East Africa are the difficulties and delays which presently occur in the obtaining of mining supplies. The position is considerably better than it was a few years ago, but is still far from satisfactory, and the spares situation, not only for mining machinery, but for general engineering supplies, is very poor.

TOO MANY AGENCIES

The chief reason for this is probably the excessive number of agencies held by the various importing firms compared to the size of the East African demand. Take, for instance, rope drives, for which a large number of manufacturing firms have agents in the territories. The total volume of business is insufficient to warrant all the agents who handle this particular line, keeping a full range of their respective manufacturers' products. As a result each agent keeps only a limited range of the smaller and commoner sizes, and there are little or no stocks held of the larger and the less commonly-used types. If the number of agencies could somehow be reduced to two, or at the most three, those agents would then have sufficient rope-drive business to warrant their keeping full stocks.

The same thing affects the position of nearly all engineering supplies, such as bearings, belt pulleys, pipe fittings, etc. The stocks are thinly distributed amongst a large number of agents spread over a number of towns hundreds of miles distant from each other.

This makes things very difficult for the small worker. He requires, perhaps, a spare part, and wires the agent he usually deals with. After a week (if he is lucky) he gets a reply saying "none in stock." He then tries another agent with the same result. After a third failure, he loses heart and tries to do without the machine affected. Probably the goods he wants are available with other agents, but stuck away in the bush several days' journey distant he cannot know that.

Many complaints are received also of the inefficiency of the importers—of telegrams not answered, of wrong parts sent, and of the lack of that spirit of Service which should be the guiding principle of all suppliers. This inefficiency greatly aggravates the position. It is probably largely due to the employment of locally-engaged people who lack the training that is so necessary if accurate, rapid despatch and willing assistance are to be criteria of service. Complaints are also received of excessive commission or profits, which in some cases is reputed to reach 100 per cent.

Regarding the smallworker, therefore, the present supply position is such as to discourage him from mechanization. In view of the shortage of mine labour which threatens in a few districts in all three Territories, this is a most unfortunate state of affairs.

For the larger concerns the situation is different. Being unable to rely on the agents to carry adequate stocks, the companies deal directly with the manufacturers and keep their own stocks. Much capital is thereby tied up. It is quite uneconomic that a full range of spares should be kept by each user for his sole purpose, but there is no other way of ensuring continuity of operation. In Tanganyika alone there is well over £1,500,000 worth of stores on the larger mines. This lock-up of capital adds to the cost of mining.

There is a vicious factor in this situation. The custom of the trade is that when a firm has the sole agency for a country they draw their commission whether goods are ordered through them or not. There is therefore no incentive for the agent to keep a full range of stocks. Since the major consumers keep their own stocks of goods which they have ordered direct from the manufacturer why should the agent worry, who draws his commission anyway just as if the goods had been bought through him.

COMMUNICATIONS

In the past poor communications have had a very bad effect on the supply of spares, but in this direction considerable improvements are apparent, internally at any rate. Externally the position remains bad—the phasing at Mombasa, the still poor delivery position of many lines supplied from the United Kingdom, the lack of dollars to purchase in America, and the frequent dock strikes in Britain, all contribute to one long tale of delay However, improved facilities at Mombasa, the new docks at Dar es Salaam, quicker deliveries from Britain and sterling convertibility are to be anticipated, and these will greatly improve the external supply situation.

Within East Africa the position has recently improved. After several years delay rolling-stock is at last being delivered, and the acute shortage of wagons is over. Air transport too, has been improved and extended, and few large mines are without a regular air service by which small spares can be quickly obtained from Dar es Salaam or Nairobi. The Williamson diamond mine finds it pays to run its own services for the bringing in of domestic requirements and mining materials and spares.

In one direction, however, there is as yet no sign of improvement. The only connection between the railways of Kenya and Uganda and the Central Line of Tanganyika is via the steamer and lighter services on Lake Victoria, and these are quite inadequate for the potential volume of traffic. Nor does there seem to be any likelihood of improvement for several years to come.

The position is aggravated by the fact that whereas two-thirds of the mining of East Africa is served by Tanganyika's Central Line, the vast majority of the importers have their head offices in Kenya. True, most of the Kenya firms have branches in Dar es Salaam, but the stocks held by these branches are seldom adequate. The relaying of orders from the branches through their Kenya head offices is also a source of delays and errors.

CONCLUSIONS

What is required then to accelerate that improvement in the provision of mining supplies which is taking place, is a reduction in the number of agencies for various lines, a transfer of head offices from Nairobi to Dar es Salaam, and the inculcation of a spirit of service upon the staffs of the importing agents. Manufacturers in the United Kingdom should be very careful in the granting of future agencies and would do well to review those which they have already given.

Accelerating Mine Development in S. Africa

Recently two new world record figures have been established by gold mines in South Africa, namely in shaft-sinking operations at Vaal Reefs with 667 ft. in 31 days, and tunnelling at Harmony G.M. with 1,394 ft. in 26 days. These performances, together with the high figures achieved on other properties, are not put up for the sake of claiming world records, but are a matter of pure economics owing to the changing pattern of pre-production financing of gold mining undertakings in South Africa. In the following article our South African correspondent describes some of the developments in tunnelling and shaft-sinking practice currently being followed to ensure that delay in production is reduced to a minimum in developing mines.

In previous years the capital required to inaugurate a new mine in South Africa was obtained through the issue of ordinary shares, the holders of which were content to wait for a return on their investment until the dividend-paying stage. The very large amount of money needed to open up the O.F.S. and Klerksdorp fields—in the neighbourhood of £12,000,000 a mine—was in excess of the amount of risk capital available. In consequence, a very considerable amount of money has been found through the issue of interest-bearing loan stock. The existence of this type of finance makes it essential that the production stage must be reached at the earliest possible moment as pre-production expenditure includes interest charges on loans. In view of this, the increased cost of high speed sinking and development is justifiable so long as it does not exceed the monetary equivalent of the time saved.

This aspect is receiving attention in South Africa as it would appear that the footages being accomplished are nearing the limit under present circumstances. The views of some of the mining men responsible for organizing and carrying out the Harmony tunnelling job on this question are of interest. Basically, in the latest record run, the methods employed varied only slightly from those used last year, which were described in detail in *The Mining Journal* at the time. On the rock-breaking side, the main change was the use of 85 lb. instead of 58 lb. machines with 2 5/8ths in airlegs instead of 2 5/16ths. This allowed drilling to be done at 14 in. a minute and reduced the drilling time for a round of 34 holes to 45 minutes.

CLEANING IN TUNNELS

An improvement in cleaning was achieved by making use of hopper trains made up of uneven numbers of cars—the previous method was to use four and four— but four and five are now employed. As soon as the re-entry period was up one car was pushed in behind the loader. While it was loading, the next car was pushed into the ready position and then put behind the loader when the first was filled. When four hoppers were full the loco moved them away to the tips leaving the fifth in position, when the second loco took over with its four cars. This meant that there was always one car in the loading position.

Investigations are being made into whether cleaning cannot be speeded up further, but so far it would appear that the one way out—the use of a conveyor belt which would allow of the loading of six or more cars at once—would increase costs over the economic limit. Another possibility is to increase compressed air supplies. During the last run it was found that during the day shift only two rounds could be blasted owing to rationing of air, but at night, when air was not being used in the rest of the mine four rounds was the average. Here again the question arises of whether the capital cost of installing additional compression plant would be justified. Three shifts were lost due to mechanical troubles and bad hanging. The view is that the limit is around 1,600 ft. in 26 days (or 78 shifts) equal to 30 ft. a shaft under conditions similar to those at Harmony where the rock face temperature 104 deg. F. Using a conveyor belt for loading, this could, it is felt, be taken beyond the 2,000 ft. mark.

On the shaft-sinking side, there has been quite a lot of information correlated from the work done at Vlakfontein, Merriespruit and Vaal Reefs which in turn established record figures and some interesting deductions drawn. These came to light as contributions to the discussion on Mr. A. J. Cundill's paper to the Chemical, Metallurgical and Mining Society of South Africa on *Mechanized Sinking of No. 2 Shaft at Vlakfontein*. One of the points put forward is that the potentialities of mechanical cleaning have not been fully exploited, due in large measure to the inadequacies in hoisting arrangements. Suggestions to overcome this include that, where sinking is done with rope guides, the two compartments should be served by separate winders operating as single drum units. These winders should be able to handle 7 or 8 ton kibbles at hoisting speeds of at least 3,000 ft. a minute. It is estimated that that at a depth of 2,000 ft. this should bring about an improvement of 14 per cent in the sinking rate.

RAPID ESTABLISHMENT OF CIRCULAR SHAFTS

The case of simultaneously sinking and equipping a circular shaft is a strong one. Apart from the general saving of time, it makes five winding compartments available, of which four can be served by double drum winders and the fifth by a single drum unit. Some of this extra capacity can be used to keep the grab supplied with empty kibbles. The Vlakfontein method of erecting the permanent headgear is regarded as good practice. One suggestion is that in order to cut undue delay between the collaring stage and the start of full-scale sinking concrete headgears offer an advantage through speed of erection.

One of the limiting factors encountered is the delays in waiting for buckets and the view is expressed that 10 ton kibbles are a possibility: The cactus grab could deliver 150 tons an hour with a continuous supply of empty buckets. On the ventilation side it is being found that with two 40 in. dia. ventilation pipes and reversible fans—described in *The Mining Journal* this year—a high rate of exhaust ventilation can be achieved during and just after blasting, together with an exhaust cum force system during drilling and cleaning. Exhaust ventilation allows immediate re-entry to the Galloway stage which acts as an effective baffle to blasting fumes. By the time that the stage has been lowered 100 ft., the shaft bottom has been cleared of fumes by forcing air down one ventilation pipe while the other is exhausting large quantities.

Longer drilling rounds are advocated, as it is held that mechanical cleaning has eliminated the restriction on the length of round due to the fatigue of the lashing crew. A mechanical grab would give the best performance if it could lash continuously for 12 hours or more. One view is that the approach to sinking, if mechanical cleaning is used should be starting with the breaking of the longest possible round and the finish should be the provision of hoisting facilities. The solution to using mechanical cleaning in a shaft being fully equipped concurrently with sinking would appear to be in the designing of a grab unit which could be withdrawn above the Galloway stage during the blast and brought into action immediately afterwards.

The Desilverization of Lead in N. Rhodesia

During the past few years buyers of lead have shown a marked preference for metal of high purity. Although there is still a demand for lead of lower purity it was decided that lead produced by The Rhodesia Broken Hill Development Company must reach the highest standards of lead produced elsewhere to compete in world markets for highly-refined lead. To put this policy into effect the company has built a new lead refinery and early this year began the production of desilverized refined lead which is probably equal in purity to that produced by any other company in the world, and purer than most of the lead produced. The following article describes the refining process used at The Rhodesia Broken Hill Development Company, and is condensed from *Optima*, Vol. 5, No. 2, a quarterly review published by the Anglo American Corporation of South Africa.

Metal from a lead blast furnace invariably contains many impurities. This is so because the ores from which lead is produced have other metallic constituents in varying amounts, and lead "collects" many of these other metals.

This characteristic of collecting other metals is both advantageous and disadvantageous. The chief advantage is that lead collects any silver present in the ore, for silver is a valuable constituent; metals such as copper, tin, arsenic, antimony, zinc, iron, nickel, cobalt and bismuth are not desirable in the finished product of the smelter.

In Broken Hill lead bullion (the metal that leaves the blast furnace) the silver content ranges from five to seven oz. per ton (from about 0.014 to 0.02 per cent); the copper content is between 0.1 and 0.5 per cent, and there are much smaller quantities of other metals. The production of super-refined lead demands the virtually complete removal of these impurities. This is now being done, for the lead content of the final product is 99.999 per cent. Although silver is a valuable constituent if it occurs in sufficient quantity, it must still be considered as an impurity in refined lead. Thus, its removal serves the dual purpose of purifying the bullion and recovering a valuable metal, which was formerly sold to the buyer as lead.

REMOVAL OF IMPURITIES

The first impurity to be removed is copper. Lead bullion, as received from the blast furnace, is in the form of large hemispherical buttons weighing about 1¼ tons. These are melted down in a large 80-ton kettle and heated to about 800 deg. F. A mechanical stirrer then agitates the molten metal, and the temperature is allowed to fall to about 650 deg. During this cooling period the copper-rich dross is skimmed off. The dross contains 12 to 20 per cent copper and 60 to 70 per cent lead; as it is a valuable product, it is stored for future metal recovery. To remove as much copper as possible, the temperature is again allowed to fall, and a quantity of sulphur is then stirred into the metal. This produces a second dross, which is returned to the lead smelter for recovery of the lead, the copper content (about two per cent) being removed later as part of the rich copper dross obtained when the first stage of refinement is repeated.

During this treatment, the copper content of the bullion is reduced to 0.005 per cent or less, and many of the impurities present in minor amounts, but not silver, are also partially or completely removed. A substantial removal of many of the impurities—especially copper, arsenic and antimony—is essential, as they would otherwise interfere with the efficient removal of silver.

Next comes the process used for separating silver from the lead bullion. This process is based upon two facts: first, silver combines more readily with zinc than with lead, and secondly, zinc-silver alloys are virtually insoluble in lead when sufficient zinc is present to saturate the lead. Thus, by the addition of zinc, silver may be made to leave the lead bullion and combine with the zinc.

Molten lead from the decopperizing kettle is pumped to another kettle and heated to 1,000 deg. F. Zinc metal is added in two stages, and the molten metal is agitated, cooled and skimmed. In the first stage, zinc is added in the form of low-grade crusts produced in a previous charge. These crusts are not rich enough in silver for eventual silver recovery, and they are used merely to build up the zinc content of the molten metal. As the temperature of the molten metal falls, but while it is still more than 920 deg., crusts form and are skimmed off. These crusts are rich in lead, but contain a low proportion of zinc and silver, and so they are returned to the kettle with the next decopperizing charge.

THE SECOND STAGE

Then the second stage starts. Zinc is added in sufficient quantity to saturate the lead at the prevailing temperature and provide an excess to combine with the silver carried by the molten lead. (Certain other low-grade crusts obtained from a previous charge are also added to the kettle at this stage). As the temperature falls through the range 920 to 780 degrees, crusts, rich in silver, are formed, and are removed for future recovery of the silver. The metal in the kettle is then cooled to about 610 deg., which cause further low-grade crusts to be formed. These are added to the next charge, as mentioned above.

Lead ceases to be known as bullion when the silver has been removed, but it is by no means completely refined at this stage. Although its silver content has been reduced from about 0.02 per cent to 0.0003 per cent, it still contains 0.4 to 0.6 per cent zinc, resulting from the addition of zinc in the desilverizing process.

The Rhodesia Broken Hill Development Company has therefore installed equipment for a new process—"vacuum dezincing"—to remove zinc from the lead. Briefly, it works as follows:

The desilverized lead is heated to about 635 deg. and pumped to another kettle. A large metal bell, equipped with a stirrer and attached to a very highly efficient vacuum pump system, is submerged in the molten metal. The temperature of the metal is raised to between 1,000 and 1,100 deg., and the almost perfect vacuum created by the pump distils the zinc from the lead. The vaporized zinc condenses on the surface of the bell and becomes metallic zinc, which is removed and used in future desilverizing processes. Such is the efficiency of this vacuum distillation that the zinc content of the metal is reduced from about 0.5 per cent to about 0.04 per cent.

PURIFICATION AND REFINING

For final purification and refining, the lead is pumped to another kettle to which caustic soda and sodium nitrate are added. The charge is agitated, and the dross, which contains almost all of the residual traces of zinc, arsenic and antimony, is skimmed off.

The refined metal then comprises 99.999 per cent lead; 0.0003 per cent silver; 0.0002 per cent each of copper, zinc and iron; and traces of arsenic, antimony, bismuth and selenium. It contains no tellurium, tin, cadmium, cobalt or nickel. This highly-refined lead is then cast into 70-lb. moulds for delivery to buyers. Additional plant is being installed to process the silver crusts produced in the desilverizing operations.

Mineral Exploitation in Greece

Despite the progress achieved since the war, mineral production in Greece last year did not reach the levels of the pre-war years. This was due chiefly to high production costs arising from inefficient methods of mining, extensive destruction of mining installations during the Axis occupation, and strong competition in the world market for minerals. Economic assistance from the United States has played an important role in providing the financial aid and technical knowledge necessary for the re-establishment of Greece's mineral industry, and the following article, condensed from *Mineral Trade Notes* Vol. 39, No. 6, published by the U.S. Bureau of Mines, gives a brief summary of Greek mining development, with particular reference to the operating companies.

Bauxite reserves in Greece are among the most important in the Mediterranean countries and are estimated at hundreds of millions of tons. The principal deposits are near Eleusis, Distomon, and Mount Parnassus; other large deposits are on the Chalkidiki Peninsula and the islands of Euboea and Amorgos. Greek bauxite has a large diaspore content and is therefore not suitable for processing in the United States. The market for Greek bauxite is limited to European manufacturers. The bauxite is principally used as a basic refractory material.

Greek production of bauxite during the first half of 1954 totalled 185,810 tons and exports 168,039, compared with 156,699 tons produced and 140,995 tons exported in the same period of 1953.

Production of bauxite during 1953 totalled 330,749 tonnes, compared with 348,591 tons in 1952, 185,226 tons in 1951, and 179,886 tons in 1938. The increased post-war production of bauxite was due to the development of the Eleusis Bauxite Mines Inc., under a DMPA contract providing for the delivery of 450,000 tons of bauxite to the account of the United States by the end of 1954. Mechanization and development of the mines was achieved through a DMPA loan of US$850,000 in foreign exchange and 9,000,000,000 drachmas. This mine accounted for 65 and 82 per cent of the total Greek bauxite production during 1953 and 1952, respectively.

The Greek Government is interested in developing the bauxite deposits and has included an aluminium plant in its long-term basic-industries programme. Studies made by S. A. pour l'Industrie de l'Aluminium, Lausanne, Switzerland, and the Lurgi company (German) during the last four years provide for the construction of a 100,000 ton alumina plant at a total cost of US$12,980,000. The project could be constructed within three and a half years. The plant would be built near developed bauxite and coal mines. Caustic soda is to be supplied by a contemplated sodium carbonate plant with a total annual capacity of 25,000 tons and fuel oil by imports. The cost of producing alumina locally is estimated at about US$50.60 a ton by the Swiss company and $50.85 by Lurgi.

An American ore crusher for service in Greece.

GOLD PRODUCTION

Northern Greece Gold Mines Co., the only gold producer in Greece, resumed dredging operations on the Gallikos River in September 1953. The dredge is handling 6,000 cubic yards of gravel a day, working 3 shifts, and is averaging more than 23 c. of gold a cubic yard.

Alluvial gold deposits were proved in the Axios, Nestos, Gallikos, and Strymon Rivers before World War II. Known deposits are estimated to contain over 20,000,000 tons of auriferous sand with a gold content of 0.25 to 0.30 grammes per cubic meter.

OUTPUT OF IRON ORE

Exports of iron ore from Greece in the first half of 1954 totalled 31,364 tons valued at 5,693,564 drachmas, compared with 49,200 tons valued at 6,169,360 drachmas during the same period of 1953.

Iron-ore output decreased from 136,721 tonnes in 1952 to 86,326 tons in 1953. Iron-ore production and exports, which in 1938 represented 30 per cent of Greek mineral production and 33 per cent of exports, was only 10 per cent and 14 per cent, respectively, in 1953. This decrease is due largely to the fact that the Tsouka and Loutsi mines in the Lokris district are idle.

The Cassandra-Stratoniki mine of the Hellenic Co. of Chemical Products and Fertilizers, Ltd., at Chalkidiki, the principal producer, accounted for 63,624 tons, or 74 per cent of the total iron-ore production. The mine received an ECA reconstruction loan in 1949 of $179,220 in foreign exchange and 1,364,000,000 in drachmas. The second largest producer, the Serifos-Spiliazeza mine on Serifos Island, operated from June to September, when it was closed because of litigation over ownership, labour disputes, and lack of working capital. The A. Hondrodimos mine on Thasos Island is producing iron ore at the rate of 1,500 tons monthly and during 1953 produced 18,000 tons or 21 per cent of the total output.

Iron-ore reserves are estimated at over 100,000,000 tons of ore, and are found on the islands of Thasos, Kythnos, Serifos, Skyros, Euboea, and Crete and on the Chalkidiki Peninsula, in the Lokris district, and in Laconia.

LEAD AND ZINC

Output of lead and zinc concentrates during the first half of 1954 totalled 2,669 and 5,316 tons, respectively, compared with 4,937 and 4,157 tons in 1953. Lead and zinc concentrates exported from Greece in the first half of 1954, totalled 685 and 7,380 tons, respectively, compared

with a total of 599 tons of lead concentrates and 4,622 tons of zinc concentrates during the same period of 1953.

The French Laurium Co., a major producer of lead and zinc, produced 4,452 tons of lead and 7,028 tons of zinc concentrates during 1953. The zinc concentrates are exported to France for refining. Silver and white arsenic also are produced as byproducts of the smelting operations.

The Hellenic Co. new selective flotation plant at Cassandra, scheduled to begin operations in mid-1952, was not opened until August 1953 because of delays in delivery of machinery and equipment. The plant, with an annual capacity of 54,000 tons of ore, was built with an ECA loan of $163,200 in foreign exchange and 1,045,000,000 drachmas.

Mediterranean Mines, Inc., accounted for the rest of the lead concentrate and zinc concentrate produced during the year. The mines were closed early in March 1953 because of financial difficulties, decline in world prices for lead and zinc, and the unanticipated exhaustion of one of the zinc deposits. Large deposits of zinc carbonate ores found on the island of Thasos were worked before the war. These ores, however, are low grade and do not warrant the cost of shipment to European smelters.

The Laurium district presents excellent geological opportunities in the development of the lower ore horizons. The Mediterranean Mines, Inc., is investigating the possibility of treating gravity concentration tailings of the old Greek Laurium Co. mines.

NICKEL PRODUCTION

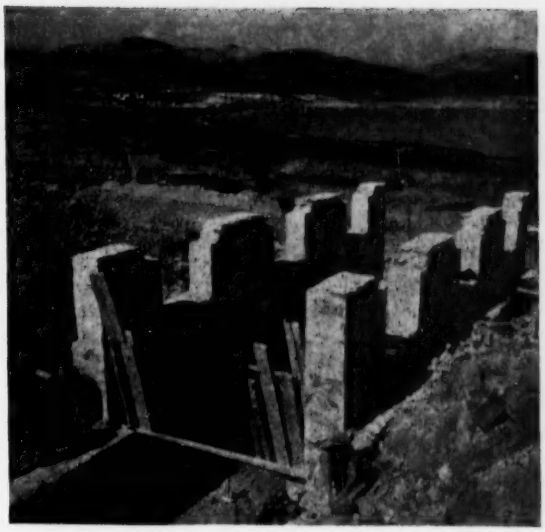
Nickel occurs in Greece chiefly in the form of nickeliferous ore deposits in the Lokris district of central Greece and on the islands of Euboea and Skyros. Nickel-copper reserves of minor importance also are found at Linogardi, near Volos, where before World War II small quantities of nickel-bearing copper ore were mined.

The principal nickel mine is at Larymna, Lokris, and from 1929 to 1935 the mine produced about 124,000 tonnes of ore containing 4.90 per cent nickel, and from 1936 to July 1941, about 243,000 tons assaying 2.50 per cent nickel. The ore mined at Larymna before the war was shipped to Germany for reduction by the Société Anonyme Internationale des Mines. The mine, which has been idle since the liberation of Greece, was leased for 36 years to the Hellenic Co. of Chemical Products and Fertilizers, Ltd., by the Government with the right to explore, conduct research, and exploit all minerals of the concession except those specifically reserved to the Greek State such as gold, petroleum, platinum, and uranium. The Hellenic Co. is completing exploration and installing a processing plant to produce iron and nickel pellets. Initial annual output will be 130,000 tonnes, the capacity of the processing kiln, but if operations warrant, production will be doubled.

Negotiations between the Krupp company, which had an interest in the mine before and during the war, and the concessionaire financing the project were successfully concluded late in 1953. The first shipment of machinery to be installed at Larymna arrived at the mine on May 6, 1954, and, according to the Hellenic Co., production was likely to begin in March this year.

EXPORTATION OF MAGNESITE

Production of crude magnesite totalled 75,464 tonnes in 1953, compared with 81,591 tons in 1952; and in the first half of 1954 output was 35,528 tons, according to Federation of Mining Enterprises reported in Quarterly Statistical report of Special Mission to Greece for Economic Cooperation, July-September 1954



Foundations for a new flotation mill on the site of the ancient Laurium silver mines

Exports of crude magnesite totalling 10,733 tons in 1953 were valued f.o.b. at $108,617, compared with 16,833 tons valued at $210,438 in 1952. Exports of caustic-calcined magnesia totalled 6,775 tons valued f.o.b. at $238,412 in 1953, compared with 22,956 tons valued at $870,446 in 1952. In the first half of 1954, exports totalled 4,095 tons of crude magnesite and 16,374 tons of caustic-calcined magnesia.

OUTPUT OF IRON PYRITE

In the first half of 1954 output of iron pyrite was 88,850 tons compared with 96,184 tons in the first half of 1953. Exports totalled 163,022 tons valued f.o.b. at $2,143,739 in 1953. Exports in the first half of 1954 totalled 75,426 tons, compared with 74,820 tons in the first half of 1953.

In so far as the Hellenic Company of Chemical Products and Fertilizers, Ltd., the major producer of iron pyrite in Greece is concerned, the company's mines at Cassandra (Chalkidiki) and Hermioni (Peloponnesus) produced 222,043 tons or 98.6 per cent of the Greek pyrite production of 225,134 tons in 1953. The balance of 3,091 tons was produced as a by-pryduct of lead-zinc concentration by the French Laurium Co (2,927 tons) and the Mediterranean Mines Inc. (164 tons).

The Hellenic Company of Chemical Products and Fertilizers, Ltd., through two reconstruction loans totalling $750,996 in foreign exchange and 2,191,000,000 drachmas completed construction of its washing mill in September 1953, with a capacity of 30,000 tonnes per month. Most of the pyrite output is exported to Germany, Austria, the Netherlands, Switzerland, and other European countries. About 40,000 to 50,000 tons annually are consumed locally by the Hellenic company at is sulphuric acid plant.

Production of iron pyrite is expected to increase in the near future. The new washing mill of the Hellenic company is already operating and, if demand for iron pyrite is strong in the international market, output can be raised to 360,000 tons anually. On the other hand, the establishment of the nitrogen plant provided for under the country's economic development programme, will increase consumption of iron pyrite. The new plant—which will satisfy the country's requirements for nitrogenous fertilizers—it is planned will consume about 60,000 tons of iron pyrite annually.

Developments in the World Coal Mining Industry

In keeping with our normal practice, the article below presents in précis those developments in the coal mining industry that have originated through the practical experience of Colliery personnel.

A lightweight coal loader, weighing only 220 lb. and using less than one-tenth of the power of the conventional loader, has been perfected in Hungary and is now at work in the Tatabánya coalfield, according to the newspaper *Szabad Nép*. The loader is the invention of József Kóta, director of the Mining Research Institute for Blasting Techniques, who needed a more efficient method of clearing the larger quantities of coal released by his millisecond delay blasting method, now being widely adopted in Hungarian mines.

The apparatus consists basically of an 11-ft. long narrow metal trough, so light that two miners can carry it from one work-site to another under their arms. A three h.p. electric motor drives the conveyor, the lower axle of which is fitted at each end with toothed wheels of armoured steel. These wheels dig into the loose coal, tumbling the pieces on to the belt and pulling the loader forward at the same time. It is stated that the new loader has considerable advantages over conventional loaders powered by 40-60 h.p. motors, which are forced forward by caterpillar tracks and are so heavy that they are difficult to move from one site to another. Cost of manufacture is £150 against £18,000 for the F-4 cutter loader.

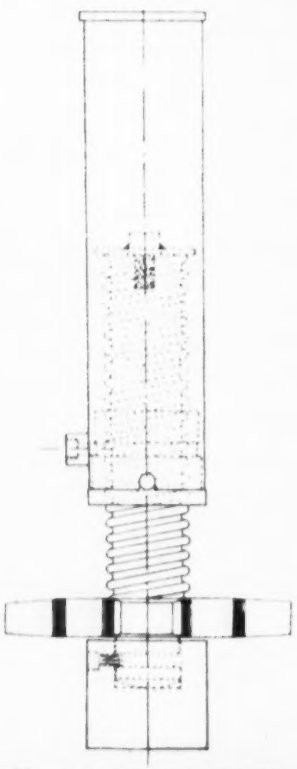
The new loader is operated from a suspension apparatus, with one end of the trough down at the work point and the other over the truck to be loaded. The suspension method allows the working end to be turned comfortably by the miner in any direction. The motor is adapted to take a drill with which the miner can drill new fuse holes while loading is going on. The report says the apparatus is so simple a miner can learn to use it in a day, against a long course of instruction for the bigger machines.

U.K. DEVELOPMENTS

A tubular pit prop which is designed to take its full load without yielding has been developed in the Cannock Chase Area of the West Midlands Division, N.C.B. The prop can be set with a suitable initial load, at the same time maintaining adjustability in length, and is capable of remote withdrawal. The necessary yield required is provided by the compression of a wooden pad placed between the top plate of the prop and the roof bar.

There are two main parts to the prop; an outer tube and a screw jack assembly. A base plate is secured to the bottom of the tube and a nut is arranged in the top of the tube, the nut having a collar which rests on the end of the tube. Relative rotation in the nut is prevented by two set pins contained in diametrically opposite bosses on the outer tube, which locate blind holes in the nut. A screw-threaded stem is arranged to be screwed up and down in the nut. Near the upper end of the stem is a sprocket and the top end of the stem has a rounded surface abutting against a top plate.

A chain designed to fit the sprocket by means of a bent link to which are welded two tongues interconnected by a bridge piece, is attached to the sprocket when the prop is to be withdrawn. A link chain attaches it to an ordinary sylvester which, when it is operated, screws the stem down, freeing the prop from the roof.



The screw jack tubular prop

BRITISH COAL BREAKER

A further development has occurred at Silverwood Colliery, near Rotherham, which for some years has encountered difficulties in conveying large pieces of coal on certain middle-cut and Cardox fired faces. Lumps have caught fast and caused stoppages of considerable duration. To alleviate these difficulties it was decided to introduce a coal breaker which would reduce the largest lumps to manageable size.

A design was produced of a machine through which run of mine coal under 8 in. would be conveyed without coming into contact with the crusher, while larger pieces would be struck by a swinging hammer and broken.

A panzer conveyor with an additional centre chain is used in this arrangement, and a tripper is incorporated which carries the run of mine coal either over or under the swinging hammer, according to its size, and collects it again underneath the hammer unit from where it passes over the driving unit on to the main gate conveyor.

A proposed device to avoid direct measuring in shaft surveying is based upon properties of a right-angled triangle whose apex angle is constant, the length of one side being readily determined. The method consists of taking two observations to each point to be fixed.

One of these observations gives direction and the other determines the distance, from which the plan is produced. In this case, the ordinary mining dial gives direction and a graduated measuring bar mounted on the top of the dial determines the distance.

The measuring bar is attached to a Cooke dial and with a second sighting arrangement sliding on the bar. It is unlikely that distances to be measured will exceed 200 in. and, therefore, the scale on the bar is 1/20th and the moveable telescope is set at an angle of 1 to 20 to the line of collimation of the dial telescope. It would be necessary to balance the tubular bar by adding weight to the short end.

ROOF BOLTING IN THE U.S.

A steady increase in the use of roof bolting is occurring in the coal mines of the United States. This was reported recently in *American Metal Market*.

Within the seven years since roof bolting was introduced, 26 per cent of the entire output of deep-mined bituminous coal in the U.S. was produced in mines using roof bolting, and 119 mechanized coal mines produce their entire outputs from areas supported with bolts. Roof bolting has had a considerable influence on mining methods, with particular reference to pillar recovery.

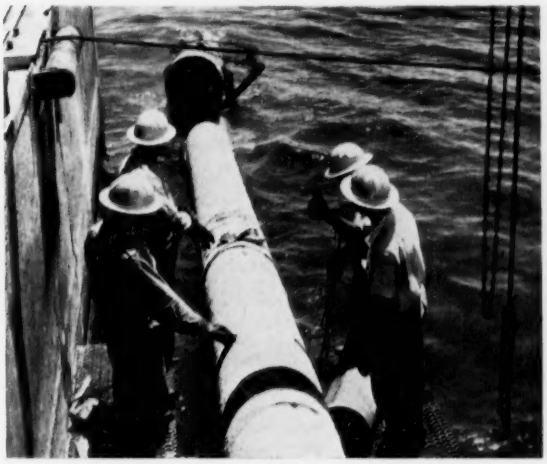
MACHINERY AND EQUIPMENT

Pipeline Project Completed in Venezuela

Costing some £2,500,000, a new 45 miles-long pipeline built for Compania Shell de Venezuela recently came into full operation in Venezuela. The Lapline, as it is called, connects the company's concessions in Lake Maracaibo with their loading terminal at Palmarejo, 12 miles to the north of the city of Maracaibo.

Starting, in 70 ft. of water, from a platform set up in the Lake, the Lapline consists of two sections. The first, 16 in. in dia. and 18½ miles long is laid along the Lake bed on a steadily rising incline to the land. Coming ashore at La Ensenada it is connected to the second section, a 24 in. dia. line, which is 26½ miles in length and terminates at Palmarejo. The rated capacity of the line is 100,000 bbl. a day.

Design and engineering work on the Lapline was carried out by the Shell Pipeline Corporation of Houston, Texas, and the



Lowering part of the submarine section of the pipeline at Lake Maracaibo.

line was constructed by contractors supervised by Shell technicians. Approximately 60 per cent of all material used in the project was supplied from U.K. or European sources.

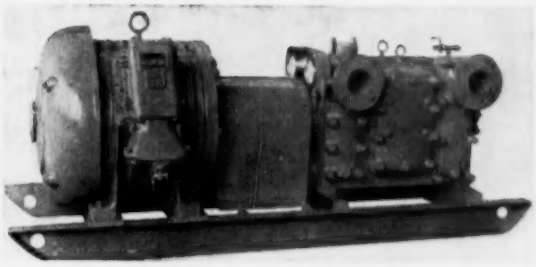
From Palmerejo the crude oil will be taken for processing to the Cardon refinery, Venezuela, which has an annual capacity of some 7,250,000 tons.

Mining Pumps in Quantity Production

The Megator GH4 mining pump, recently put into quantity production by Megator Pumps and Compressors Ltd., has been thoroughly tried out for some time in mines in the U.K. Its development is based on the operating experience gained with the Megator type M pumps, of which some thousands have been installed in mining service during the past nine years, but it has a considerably larger capacity, and will operate at higher heads, than any Megator pump hitherto produced. It also has several new mechanical features of interest.

The GH4 pump is normally direct-coupled to a 30 h.p. motor at 960 r.p.m., and delivers 160 Imperial gallons per minute against 350 ft. total head. It is thus particularly adaptable to intermediate pumping generally, to pumping between levels in horizon mining, and, in the case of shallow mines, to delivering from the working face to the surface. The standard mining set comprises a welded steel skid base and direct-coupled mining-type motor, providing a robust unit of compact design, easy to handle underground and requiring only low headroom.

In operation, the GH4 pump has the same constant-capacity characteristics as all other Megator pumps, giving uniform capacity and substantially uniform efficiency over the whole



The Megator GH4 mining pump.

normal operating range of suction lifts and delivery heads, a vital advantage in mining pumps, where the total heads involved are subject to continual variations. It also has strong suction powers and snoring ability, and can deal continuously with any inflow of water from the smallest seepage to the full capacity of the pump. The ability to perform with complete reliability under snoring conditions, besides being essential for operation at working face, is a valuable feature in the case of intermediate pumps drawing from sumps, as it enables them to run continuously on part capacity without attention and without the necessity for float control.

The familiar Megator pumping mechanism, comprising simply the rotor of nitralloy or stainless steel and the plastic shoes, is combined in the GH4 pump with Megator water-lubricated synthetic rubber bearings. This type of bearing, which was developed by Megator and has been used increasingly in recent years, has proved to have a long trouble-free life under abrasive conditions.

Rescue Suit from the U.S.S.R.

A new gas and heat resistant suit for mine rescue work has been produced in the Soviet Union. The equipment is claimed to permit operations being carried on at a surrounding temperature of 125 deg. C. and 100 per cent humidity. The headpiece is equipped with built-in oxygen apparatus, air purifier, a cooler and a telephone.

Mine rescue suit manufactured in the Soviet Union.

METALS, MINERALS AND ALLOYS

COPPER.—Copper has continued a relentlessly tight market in the United States on the basis of 36 c. per lb., the price that is still being maintained by the domestic producers. There is already talk that the producers will be forced to up their price once again before the year is out and, certainly, as each week rolls by the day on which some easement can be expected is pushed further back. There is, of course, plenty of justification for an immediate rise as some copper users, who cannot get all they need from the producers, have been paying 45 c. for available parcels—in other words, the free London price. Others have been buying No. 2 copper wire scrap at 34½ c. which would work out at 39½ c. for revived metal and will not anyway be available for three months. On the other hand, it can just as well be argued that if the American producers do not wish to observe a free market price not a great deal of importance attaches to the actual price they charge.

Certainly the producers cannot really afford another increase till after the new wage contracts are settled. The negotiations on these contracts are approaching a climax. It is believed that some producers have offered an increase of 7 c. an hour against a demand of 20 c. basic increase with additional increase for second and third shift workers and some supplement to unemployment benefits. Strike ballots have now been taken at most locals and they are confidently expected to authorize strike action if need be. Within a week it is quite possible that the copper mining industry—or a substantial part of it—will be struck.

In these circumstances rumour and fear have their head. On the one hand it has been suggested that some fabricators are finding orders slackening off a little, while the slow-down consequent on the arrival of the vacation period may also soon begin. On the other, there is the undoubted fact that copper stocks are everywhere low and that all are anxious to replenish, partly to reach a securer basis for operations, partly as insurance against a strike and partly to rebuild stocks against year-end tax considerations. The confused picture should sort itself out in the next fortnight unless a prolonged strike is in the offing.

Fortunately, the grievance strike which also shut down five plants of the American Brass Company has ended after seven days. A much more threatening strike, now happily averted, was that of the maritime unions for, with American shipping at a standstill, the carriage of Chilean supplies would have been interrupted.

While the situation in the United States is tense it is some comfort that, always excepting wild cat strikes, there is no reason to expect any immediate trouble in Chile and that the situation has calmed down in Northern Rhodesia following the short strike earlier in the month.

LEAD.—There has been a steady and at least moderate demand for lead on the basis of 15 c. per lb. New York with all trades joining in the demand. When it was clear that 12.50 c. for zinc was generally established a bout of buying took place against the possibility of an increase in lead. The position of lead is not, however, the same; it is enjoying a steady but not outstanding demand as, for example, special high-grade zinc is; secondly, there is no certainty that if the price was carried beyond 15 c. the authorities would continue to buy for the stockpile. The market quickly came round to this more sober view and talk of a price rise faded.

TIN.—Tin has fluctuated at between 94 and 95 c. per lb. in New York and has been subject to most of the stimuli affecting the other non-ferrous metals. The market has been particularly concerned at the prospect of a strike of the maritime unions which has now, fortunately, passed, while it relaxed considerably with the news of quieter conditions in Singapore. Yet the biggest danger remains—the possibility of a stoppage in the steel industry.

It has been reported from Holland that the International Tin Agreement has been approved in Parliament. The approval of France among the consumers and of Indonesia among the producers are now all that is necessary. Since Indonesia has hung back so long there is now no logical reason to expect her to ratify unless there is a sudden change in American policy on the Texas smelter and on tin stockpiling. There is, however, the possibility that Indonesia may ratify before the end of the year and so give the I.T.A. chance to start working in the early part of 1956.

It is, of course, entirely possible that Indonesia is hoping that American policy will continue along its present lines until the growth of tinplate consumption makes good the drop in virgin tin consumption following the introduction of electrolytic tinning. The latest bulletin of A. Strauss and Co. is devoted to the long-term trends in tin production and consumption. The review believes that the possibilities of change over from hot dipping to electrolytic in the United States are now virtually exhausted although the process can still continue in the United Kingdom and elsewhere. On the other hand, it is impossible to estimate the likelihood of large-scale substitution of other metals for coating in place of tin; there is a good deal of work on the use of aluminium currently going on in the United States. However, in the absence of any great change in the present trends it is entirely possible that the world consumption of virgin tin will have climbed back to the 1937 level by 1956 or at least 1957.

Malayan production of tin concentrates in May reached 5,115 tons against 4,874 tons in April and 5,098 tons in May last year.

ZINC.—The rise in the price of American zinc, which was forecast in this column a fortnight ago, has in fact taken place. Yet, as was pointed out last week, there were many who were hesitant and uncertain about it. Market reports, 24 hours before the rise on June 16, were maintaining that the chances of an increase had waned. Once again, St. Joseph Lead was in the van in putting its East St. Louis price for prime western grade up to 12.50 c. per lb. and was followed quickly by some and hesitantly by other producers and custom smelters. However, by the end of the day all had fallen into line at the highest price since January 14, 1953.

The increase was made immediately after the authorities had announced acceptance of the offer of metal for delivery to the stockpile on August 15 at the old price of 12 c. Although the rise was made on the day on which the National Maritime Union telegraphed strike orders to its members at 18 ports—a fact which caused concern in other markets besides zinc—the real justification for the rise was more soundly based on long-term trends.

First, there is the continuing buying for the stockpile. This has fallen off of late but only because commercial demand has been so good that smaller offerings have been made to the authorities. Furthermore, the very fact that smaller purchases are now being made means that the 300,000 tons goal will take longer to reach and the guarantee of continued stockpiling will last further into the future.

The second factor is the continuing strength of consumer demand. The wage settlement in the automobile industry has removed a major threat. It is still not clear when automobile production will be cut back, but when it is the demand for special high-grade zinc must fall away. If, on the other hand, Ford and General Motors persist in their present rate then it is more than possible that one of the independents may go to the wall. Whatever uncertainty there is about special high-grade (and demand could fall quite appreciably without causing the producers any concern) there is none at all about prime western so long as the building boom lasts and particularly cheap mortgages are available. There is no foreseeable end to this building boom and, after all, it is the sale of prime western to galvanizers that is the main support of the zinc producing industry. Finally, there is the continuing high rate of industrial activity in the European continent. Since the price rise buying of zinc has naturally slackened but this is not expected to be more than a temporary pause. However, there are definitely two schools of thought among zinc producers; those who are determined to see zinc at not less than 13 c., which is the lowest of the so-called fair prices for the metal, and those who have one eye on the miners' wage claim and another on the fact that zinc has recovered because of its cheapness. Much more should be known of the first of these worries by next week.

Meanwhile, smelter zinc stocks in the United States declined at the end of May to 63,184 tons; this is the lowest figure since 1952 and compares with a peak at the end of May, 1954, of 209,828 tons. Production continued at a high rate of 86,177 tons; this was in excess of the 83,336 tons taken for domestic consumption but with 3,802 tons taken for export and 10,434 tons for Government account, total drawings on the exceeded production for the third consecutive month rose to 70,084 tons against 65,127 a month earlier.

ALUMINIUM.—Dr. Arthur Flemming, the U.S. Defence Mobilizer, stated earlier this week that the total supply of aluminium available to U.S. consumers in the third quarter of this year will be 557,000 s.tons. This figure includes the latest stockpile diversion but even so the total supply to be made available would not satisfy all demands which he estimated at 572,000 s.tons in the third quarter, including export requirements.

Dr. Flemming announced these estimates whilst giving testimony before a government sub-committee which was studying the problem of the equitable distribution of the 100,000 s.tons of aluminium diverted by the government from shipment to the stockpile in the third quarter of 1955. In this latter connection Dr. Flemming earlier stated that because the shortage of aluminium was still extremely serious a decision as to the desirability of instituting the so-called "third round" expansion programme could be expected within the next month.

During May the output of primary aluminium in the U.S. rose to the record level of 131,128 tons, thereby topping the previous high production level of 130,272 tons recorded in March of this year. For the first five months of 1955 aluminium production totalled 632,234 tons against 469,503 tons in the corresponding period of 1954. If aluminium output in June remains high a new record for the first half of the current year will have been established.

West German production of aluminium during the first five months of this year totalled about 55,600 tons—10 per cent up on the corresponding period last year. Consumption has also been increasing steadily since last year.

Yugoslav bauxite production during the first three months of 1955 totalled 547,600 tons of which over 25 per cent was exported.

COLUMBIUM-TANTALUM.—The Molybdenum Corporation of America and the Kennecott Copper Corporation have announced a joint scheme for the development of the columbium-tantalum ore deposit in Canada at Oka, about 40 miles south-west of Montreal on the St. Lawrence River. It has been estimated that it would cost about $3-4,000,000 to bring the property to the production stage and would require about two years. The present quotation in New York for ferro-columbium is $12 a lb. for 50-55 per cent contained columbium.

MOLYBDENUM.—Molybdenum, the use of which has shown a steady expansion in recent months, particularly in high-speed steels, showed a further increase in consumption in April. In fact, consumption of molybdenum concentrates in the U.S. in April increased by 25 per cent over the preceding month and was the highest figure recorded since the monthly average of the second quarter in 1945.

Although the production of molybdenum concentrates dropped by 7 per cent in April shipments rose by 11 per cent compared with March, while the production of molybdenum products in April was approximately 27 per cent greater than in March.

The outlook for molybdenum appears bright. Its use in special high strength structural steels has been gaining ground rapidly and it is believed that the metal will play an increasingly more important role in the high temperature metal field in connection with aircraft and missile development.

QUICKSILVER.—The first quicksilver mining company in the Philippines, Palawan Quicksilver Mines, has announced that production of mercury will begin some time next month. Palawan Quicksilver is a subsidiary of Marsman and Co. which has stated that the ore reserves blocked out at Palawan totalled 135,000 s.tons containing approximately 1,020,000 lb. of quicksilver.

URANIUM.—The Heppenstall Company, Pittsburg, has successfully produced uranium ingots by press-forging on a pilot plant commercial scale.

The Japanese Government has officially announced that it has decided to accept the U.S. offer of uranium concentrates for use in atomic research projects in Japan. Negotiations to this end are due to begin shortly through the Japanese Embassy in Washington.

The DNPM has received a number of specimens of uranium and thorium minerals, discovered in Rio Grande do Norte and Paraiba. In the Jacobina and Brumado regions of Bahia a deposit of uranium associated with auriferous minerals has been located, similar to those found in South Africa. An aerial survey of the zone is being carried out.

Reserves are also known at Araxa and Pocos de Caldas, where plants to treat uranium are being installed. Between 1.5 per cent and two per cent of 235 uranium can be enriched using the centrifugal machines ordered in Germany.

The London Metal Market

(From Our Metal Exchange Correspondent)

The copper market has developed a weaker undertone due to the beginning of the holiday season influence and to the expectation that the dock strike is nearing its end. Demand has not been impressive, and, as is usually the case, as soon as prices began to sag consumers tended to delay purchases. The overall position of copper, however, is extremely good, and no general weakening of the price structure throughout the world can be expected, but it does seem that the price level for marginal requirements may be reduced sharply on this side of the Atlantic. Another interesting feature has been the progressive decrease in the backwardation which is expected to continue.

Last week's firm tin market did not continue, and during the period under review fluctuations have been uninteresting. On Thursday morning the Eastern price was equivalent to £743½ per ton c.i.f. Europe.

The zinc market remains steady, being helped by the rise in the U.S. domestic quotation, but all reports go to show that now the expected rise has taken place demand is not as active as in recent weeks. The American stock figures have once more shown an appreciable decline, and any recession in the zinc price is likely to prove temporary.

Once again the lead market has been featureless, with a very small turnover and with no outside events worth noting.

Closing prices and turnovers are given in the following table:

	June 16		June 23	
	Buyers	*Sellers*	*Buyers*	*Sellers*
Copper				
Cash	£347	£349	£339	£340
Three months	£336	£337	£329	£330
Settlement	£349		£340	
Week's turnover	2,575 tons		2,480 tons	
Tin				
Cash	£729	£729½	£724	£725
Three months	£729	£729½	£724	£725
Settlement	£729½		£725	
Week's turnover	865 tons		405 tons	
Lead				
Current half month	£102¼	£102½	£102½	£102¾
Three months	£102½	£102¾	£102¾	£102½
Week's turnover	3,975 tons		2,575 tons	
Zinc				
Current half month	£91¾	£92	£91¾	£91½
Three months	£90¼	£90½	£90¼	£90½
Week's turnover	4,455 tons		2,850 tons	

OTHER LONDON PRICES — JUNE 23

METALS

Aluminium, 99.5%, £163 per ton
Antimony—
English (99%) delivered, 10 cwt. and over £210 per ton
Crude (70%) £200 per ton
Ore (60% basis) 22s./24s. nom. per unit, c.i.f.
Bismuth (min. 2 cwt. lots) 16s. lb.
Cadmium (Empire) nominal
Chromium, 6s. 5d./7s. lb.
Cobalt, 21s. lb.
Gold, 251s. 7½d.
Iridium, £30 oz. nom.
Manganese Metal (96%-98%) £255/£265 according to quantity
Magnesium, 2s. 4d. lb.
Nickel, 99.5% (home trade £519 per ton
Osmium, £27 oz. nom.
Osmiridium, £40 oz. nom.
Palladium, £6 12s. 6d./£7 5s. oz.
Platinum, £27 10s./£29
Rhodium, £40
Ruthenium, £16 oz.
Quicksilver, £108 ex-warehouse
Selenium, 43s. nom. per lb.
Silver, 77½d. f.oz. spot and 76⅞d. f'd
Tellurium, 15s. lb.

ORES, ALLOYS, ETC.

Bismuth .. .. 60% 8s. 3d. lb. c.i.f.
20% 3s. 3d. lb. c.i.f.

Chrome Ore—
Rhodesian Metallurgical (semi-friable) 48% £13 per ton c.i.f.
,, Refractory 45% .. £13 per ton c.i.f.
,, Smalls 42% .. £10 2s. 6d. per ton c.i.f.
Magnesite, ground calcined .. £26-£27 d/d
Magnesite, Raw .. .. £10-£11 d/d
Molybdenite (85% basis) .. 105s. 3d.-108s. 1d. per unit c.i.f.
Wolfram and Scheelite (65%) .. 240s./245s. 6d. c.i.f.
Tungsten Metal Powder (98% Min. W.) .. 19s. 9d. nom. per lb. (home)
Ferro-tungsten (80%-85%) .. 16s. 9d. nom. per lb. (home)
Carbide, 4-cwt. lots .. .. £37 6s. 3d. d/d per ton
Ferro-manganese, home .. £53 17s. 6d. per ton
Manganese Ore Indian c.i.f. Europe (46%-48%) .. .. 80d./81d. per unit
Manganese Ore (38%-40%) .. 67d./69d. per unit
Brass Wire .. .. 3s. 2½d. per lb. basis
Brass Tubes, solid drawn .. 2s. 7½d. per lb. basis

THE MINING MARKETS

(By Our Stock Exchange Correspondent)

Mining shares during the past week have been overshadowed by home industrials which again reached a new peak. Selective buying has been a feature in markets which have continued to readjust price levels to discount the sharp inflation which took place in the immediate post-war period. Companies with a big difference between earnings and distribution were the most favoured. Strong American buying was in evidence in certain sections. Sterling overseas continued to fall away. The country is now feeling the effects of the dock and railway strikes.

Among mining finance houses, there was little change although the warning by Sir Ernest Oppenheimer concerning the difficulty of obtaining suitable labour in South Africa had its effect. He believes that the unsettled political conditions are responsible for much of this. Central Mining, which had its jubilee this year, went ahead on favourable reference in the press to its strong financial position. Houses having interest in the Far West Rand also maintained their position well.

Individual mines were less happy. Hartebeestfontein remained firm due to the rapid development which has taken place on the mine and reports that initial crushing will not be long delayed. Most other issues fell away due to lack of interest.

In the Orange Free State there was some speculative buying of Freddies Consolidated. Loraine gained the turn on the official opening of the property and the chairman's optimistic comment concerning its future. There was some investment buying of Orange Free State Investment Trust but most of the leading mines turned dull.

Among West African and West Australian shares there was little of interest to report. Ashantis fell back on the appearance of a few sellers on the market.

Among miscellaneous mines, Indians were idle despite further moves by local government officials concerned with the possibility of taking over the properties. St. John d'El Rey staged a sharp recovery.

Copper shares responded to the record profits on the Rhodesian Copperbelt and most of the leading issues went ahead well. Rhodesian Selection were an especial feature and it was reliably reported that American buyers had come in strongly to the shares. Chartered were another good spot. Apart from the royalties which the company are receiving with copper at its present level, an agreement has just been signed whereby the Anglo American Corporation will prospect large areas of North Rhodesia under licence. The rise in Selection Trust can also be partially attributed to American interest.

Recent good dividends and the optmistic report from Siamese Tin helped Eastern tin shares. Elsewhere, Beralts were a feature due to favourable press comment on the company's prospects. Attention has been drawn by the Royal Commission on taxation to the heavy incidence of tax suffered at home and abroad by companies of this type and this has raised hopes that some alleviation may be forthcoming.

Lead/zinc shares were influenced by the probably upward trend of the zinc price in Canada and the steadiness of the London metal market. Most of the leading Barriers went ahead after last week's check. Lake George was an exception, the company is a high cost producer and has had considerable labour trouble in the past. San Francisco Mines are paying the same dividend but have reduced the bonus. This failed to daunt investors and the shares gained the turn. The position of Uruwira caused interest in the shares. The company's new mill should be in full production by the end of June.

Among miscellaneous base metals Consolidated Murchison dropped sharply. The chairman's statement that the price of antimony will be most uncertain after existing contracts have expired in two months' time accounted for this.

Canadian mines were responsive to the movements of Wall Street and the better prospects for base metal producers in the Dominion. Share prices mostly gained the turn.

Finance	Price June 22	+ or — on week
African & European	3½	
Anglo American Corpn.	8½	+⅛
Anglo-French	21/3	—3d
Anglo Transvaal Consol.	27/6	
Central Mining (£1 shrs.)	46/6	+ 3/-
Consolidated Goldfields	61/3	
Consol. Mines Selection	39/4½	—7½d
East Rand Consols	2/1½	—3d
General Mining	5¼	+⅛
H.E. Prop.	10/-	+ 6d
Johnnies	39/-	
Rand Mines	3⅜	+⅛
Rand Selection	43/9	—7½d
Union Corporation	41/9	—3d
Vereeniging Estates	4½	+⅛
Writs	41/9	+ 3d
West Wits	39/9	—1/9
Rand Gold		
Blyvoors	29/-	—1/3
Brakpan	6/-	—9d
Buffelsfontein	37/-	—3d
City Deep	10/6	
Consol. Main Reef	21/9	—1/6
Crown	48/9	
Daggas	55/7½	—2/6
Dominion Reefs	34/-	—9d
Doornfontein	25/9	—10½d
Durban Deep	30/7½	—7½d
E. Champs	6/3	
E. Daggas	10/-	—9d
E. Geduld (4s. units)	31/3	+ 9d
E. Rand Props.	3⅛	
Geduld	4⅛	
Govt. Areas	6/3	—6d
Grootvlei	20/9	
Hartebeestfontein	37/9	+ 3d
Libanon	8/3	—3d
Luipaards Vlei	22/-	
Marievale	21/6	+ 9d
New Kleinfontein	7/6	+ 3d
New Pioneer	14/6	—9d
Randfontein	58/-	+ 6d
Robinson Deep	18/9	
Rose Deep	14/6	+ 1/-
Simmer & Jack	3/9	
S.A. Lands	24/-	—1/-
Springs	2/3	—1½d
Stilfontein	27/3	—1/-
Sub Nigel	38/9	—1/3
Vaal Reefs	33/6	—1/-
Van Dyk	3/3	—3d
Venterspost	13/-	—6d
Viakfontein	16/9	—6d
Vogelstruisbult	31/9	—3d
West Driefontein	5⅛	—⅛
W. Rand Consolidated	46/3	—1/3
Western Reefs	40/-	—2/6
O.F.S. Gold		
Freddies	3/9	
Freddies Consolidated	5/10½	+ 3d
F.S. Geduld	4⅛	—⅛
Geoffries	15/9	—6d
Harmony	34/9	—9d
Loraine	9/6	+ 4½d
Lydenburg Estates	20/-	—1/-
Merriespruit	10/6	—6d
Middle Wits	18/-	—6d
Ofsits	3⅛	+⅛
President Brand	69/4½	—1/10½
President Steyn	36/-	—9d
St. Helena	30/-	—6d
Virginia Ord.	14/7½	—1½d
Welkom	21/-	—1/3
Western Holdings	4⅛	—⅛
West African Gold		
Amalgamated Banket	2/3	—1½d
Ariston	6/6	
Ashanti	23/1½	—7½d
Bibiani	4/9	+ 1½d
Bremang	1/4½	
G.C. Main Reef	3/4½	+ 1½d
Konongo	3/-	
Lyndhurst Deep	1/6	+ 3d
Marlu	1/3	
Taquah	2/3	
Western Selection	10/3	—6d
Australian Gold		
Gold Mines of Kalgoorlie	13/-	
Great Boulder Prop.	10/6	+ 3d
Lake View & Star	19/3	+ 3d
Mount Morgan	19/3	+ 3d
North Kalgurli	7/4½	—1½d
Sons of Gwalia	5/3	
Western Mining	9/1½	
Miscellaneous Gold		
Cam & Motor	8/10½	+ 1½d
Champion Reef	3/9	
Falcon Mines	6/9	—3d
Globe & Phoenix	23/6	
G.F. Rhodesian	6/6	+ 6d
Motapa	1/6	
Mysore	4/3	
Nundydroog	6/-	
Ooregum	4/6	
St. John d'El Rey	13/1½	+ 1/1½
Zama	50/-	+ 7½d
Diamonds and Platinum		
Anglo American Inv.	9¼	—¼
Casts	26/-	—1½d
Cons. Diam. of S.W.A.	7	
De Beers Defd. Bearer	6¼	+⅛
De Beers Pfd. Bearer	15¾	—¼
Pots Platinum	9/6	+ 1/-
Waterval	14/9	+ 3d
Copper		
Bancroft	43/3	+ 9d
Chartered	65/-	+ 3/9
Esperanza	4/4½	—1½d
Messina	8¾	+¼
Nchanga	15⅞	+⅛
Rhod. Anglo-American	103/6	—9d
Rhod. Katanga	22/4½	+ 7½d
Rhodesian Selection	46/3	+ 8/3
Rhokana	39½	—¼
Rio Tinto	61½	+¼
Roan Antelope	27/4½	+ 1/7½
Selection Trust	79/4½	+ 5/4½
Tanks	7⅛	+⅛
Tharsis Sulphur Br.	7⅛	—⅛
Tin (Eastern)		
Ayer Hitam	32/3xd	—3d
Gopeng	9/10½ xd	+ 6d
Hongkong	7/6	—1½d
Ipoh	24/-	
Kamunting	8/9	+ 1½d
Kepong Dredging	3/3	
Kinta Tin Mines	14/-xd	—3d
Malayan Dredging	9/6	+ 3d
Pahang	12/-	+ 9d
Pengkalen	11/10½	+ 1½d
Petaling	9/7½	+ 1½d
Rambutan	19/3	+ 3d
Siamese Tin	7/10½	+ 4½d
Southern Kinta	18/6	—1½d
S. Malayan	8/1½	—1½d
S. Tronoh	10/4½	
Sungei Kinta	12/6	
Tekka Taiping	7/3	+ 6d
Tronoh	9/-xd	+ 3d
Tin (Nigerian and Miscellaneous)		
Amalgamated Tin	13/6	
Beralt Tin	33/6	+ 2/-
Bisichi	7/6	
British Tin Inv.	22/3	+ 10½d
Ex-Lands Nigeria	2/9	—1½d
Geevor Tin	12/10½	
Tin (Nigerian and Miscellaneous) contd.		
Gold & Base Metal	2/3	—1½d
Jantar Nigeria	6/7½	—1½d
Jos Tin Area	14/-	
Kaduna Prospectors	2/3	—1½d
Kaduna Syndicate	2/10½	—1½d
London Tin	8/9	+ 3d
United Tin	2/1½	
Silver, Lead, Zinc		
Broken Hill South	55/6xd	+ 2/6
Burma Mines	3/3	+ 6d
Consol. Zinc	50/7½	+ 2/1½
Lake George	10/3	—1/1½
Mount Isa	57/6	+ 4/-
New Broken Hill	39/4½	+ 3/9
North Broken Hill	76/10½	+ 2/10½
Rhodesian Broken Hill	13/9	
San Francisco Mines	23/7½	+ 6d
Uruwira	8/3	+ 1/6
Miscellaneous		
Base Metals and Coal		
Amal. Collieries of S.A.	48/-xd	—1/-
Associated Manganese	36/10½	+ 7½d
Cape Asbestos	11/3	—6d
C.P. Manganese	36/-	
Consol. Murchison	61/3	—5/-
Natal Navigation	2½	—⅛
Turner & Newall	113/1½	
Wankie	17/9	—3d
Witbank Colliery	4	—¼
Canadian Mines		
Dome	$30	
Hollinger	$45½	+ ½
Hudson Bay Mining	$113½	+ 1
International Nickel	$128¾	+ 2¼
Mining Corpn. of Canada	£7¾	+⅛
Noranda	$98½	+ 1
Quemont	£8⅜	
Yukon	4/6	—1½d
Oil		
British Petroleum	120/9	+ 15/1½
Apex	31/6xd	+ 1½d
Attock	49/4½	—7½d
Burmah	7½	—¼
Canadian Eagle	54/3	
Mexican Eagle	22/-	—3d
Shell	6½	+⅛
Trinidad Leasehold	33/7½	—4½d
T.P.D.	24/6	+ 3d
Ultramar	31/1½	—1/4½

CENTRAL MINING AND INVESTMENT CORPORATION CELEBRATES ITS GOLDEN JUBILEE

The Golden Jubilee of the Central Mining and Investment Corporation Ltd. has been marked by the publication of a well-produced brochure recording the major activities of the Corner House Group.

Within its pages, the gold mines of the Witwatersrand, traditionally a pillar of the Corporation's interest, are described comprehensively, while the widening field of the Corporation's interest apparent in recent years is revealed by descriptive matter relating to South African colliery properties and secondary industry such as timber, lime and cement. The space devoted to the Corporation's investment in Trinidad Leaseholds Ltd. indicates its level of confidence in the oil industry.

Prefaced by a foreword from Rt. Hon. Lord Baillieu, K.B.E., C.M.G., the chairman, the brochure outlines the history of the Corporation from its inception until the present day.

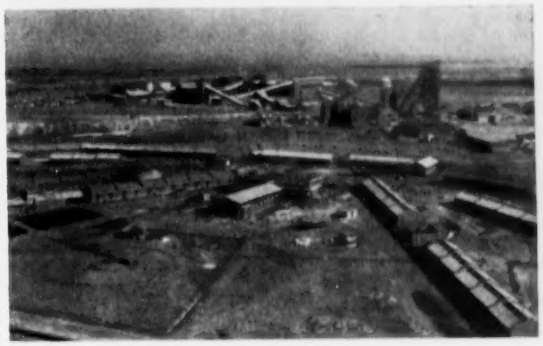
CURRENT PROBLEMS

On current problems, Lord Baillieu's statement to shareholders at the Corporation's annual meeting provides the context in which the present financial and technical problems facing the mining industry can properly be discussed.

Two problems, Lord Baillieu states, stand out as being of the first importance with regard to investment in the Union of South Africa. Firstly, the possible future course of present disturbed political conditions, and secondly, the state of the country's internal and external economy. Although Lord Baillieu had no comment on the former problem to offer shareholders of the Central Mining and Investment Corporation in his annual statement which is reported on another page of this issue, his reference to the latter position were most apposite.

Though much thought and comment has centred around the establishment of the new South African gold mines since the war, together with raising productivity at the older properties to a level commensurate with the post-war rise in costs, insufficient attention has perhaps, at any rate overseas, been focused on the strain which these great expansion plans have had on the economy as a whole. Some idea of the difficulties involved may be gained from last year's achievement by the gold mining industry which reached a milling total of 62,500,000 tons—the highest figure since 1942. This substantial increase in the industry's activity has made enormous demands upon ancillary services such as electricity supply and rail transport. In addition, it had the effect of substantially raising demands upon the resources of essential commodities such as cyanide, cement, coal, lime, timber and explosives.

Naturally enough the increasing momentum of both mining and industrial expansion have created shortages. But these, says Lord Baillieu, have not reversed the general trend towards enlargement of operations. Government departments have actively pursued measures designed to remedy the disparity between capital works and secondary industrial expansion, while at the same time much has been achieved towards meeting the most urgent demands for power, telecommunications, housing, roads and water supply. The Railways Administration have invested more than £120,000,000 over the last six years in their attempts to overcome transport bottlenecks.



A general view of Harmony G.M.

In the face of all these difficulties it has therefore been of the greatest credit to the Union that its internal and external economic position should now be in so sound a state. Indeed, as Lord Baillieu said "The country is now comparatively free from internal inflation,"—it is hard to find many other countries to which this comment might be applied. Besides this, a surplus on visible trade account in respect of 1954 amounting to some £50,000,000 was achieved and for the first time in several years a favourable net balance of payments totalling £44,000,000 was realized after taking into account visible imports and the inflow of foreign capital. Another encouraging pointer towards the country's economic well-being has been the level of private savings which rose during 1954 to £220,000,000 from the average of £170,000,000 over the previous five years. There has also been a noticeable trend towards greater participation in capital formation by public or semi-public institutions.

All this would seem to comprise an attractive investment climate and yet the strength of the Union's financial position has in recent months been largely disregarded due to the reticence of the overseas investor arising from a distrust of future political conditions. That these fears appear to many to be unrealistically founded is undoubtedly true, but on the other hand, as we are only too aware in the United Kingdom, the depredations caused by industrial unrest upon a financial system—however sound—can prove to be fatal. This is not to say that such a development is imminent in the Union, on the contrary, industrial relations conditions have been, and continue to be, extraordinarily good especially in the mining industry.

A good deal of confidence in the future was, however, implicit in Lord Baillieu's statement that he believes South Africa is passing from the period of "consolidation" which started in 1952 into one of "stability" during which additional benefits will be reaped from the long-term projects now in hand.

TEN YEARS HENCE

More specifically, the Central Mining—Rand Mines—complex may evolve into a vastly different organization ten years hence. With the bulk of its gold mining ventures over which it has direct management control well past the peak of their productive lives it remains to be seen how the Corporation will re-establish its position in the South African gold mining industry. Certainly the Corporation's present financial position is strong enough to enable it to acquire an important investment stake in the young mines rapidly being developed in the Orange Free State, in the Klerksdorp area, and on the Far West Rand. But whether or not this will take the form of investment qua investment without incurring managerial responsibilities is anybody's guess. One possible course of action would be to pursue a policy of amalgamation and to take over lesser mining finance houses. While another would be to gradually evolve into a purely mining investment company, along the lines followed by Chartered and Rio Tinto.

Yet this is to take too much time by the forelock to be considered as a problem requiring serious discussion in the immediate future. In any event the corporation may have a precedent or two to act as a guide and a criterion when the time comes for it to decide upon the most fruitful course of action.

GOLD MINES OF THE GROUP
Summarized results from commencement of operations to December 31, 1954

Company	*Operations Started*	*Issued Share Capital at* 31.12.54 (£000)	*Ore Milled* (*Tons* 000)	*Gold Produced* (oz. 000)	*Dividends Paid** (£000)
Blyvooruitzicht G.M.	Feb. 1942	3,000	8,485	5,630	21,904
City Deep	Dec. 1910	2,027	49,322	13,607	11,729
Cons. M.R.	Jan. 1898	1,248	59,841	12,028‖	9,231
Crown Mines	Aug. 1897	943	136,977‖	36,471	42,059
Durban R'pt Deep	July 1898	1,163	48,816	10,587	8,534
East Rand Prop.	July 1908	1,980	96,055	23,697	19,193
Geldenhuis Deep	Oct. 1895	28	31,497	7,410	5,077‡
Harmony G.M.	Sept. 1954	4,023	174	59	—
Modder B.	Sept. 1911	280	33,474	9,120	16,153§
Modder East	April 1920	931	38,085	7,276	6,971
New Modder	June 1895	455	59,915	18,794	36,064*a*
Nourse Mines	Oct. 1897	784†	30,904	8,267	4,699
Rose Deep	Oct. 1897	595	38,763	8,308	6,463*b*
Tvl. G.M. Ests.	Sept. 1895	853	11,681	3,574	3,053
Welgedacht Expl.	Dec. 1947	679	2,687	336	—
TOTALS		18,987	646,673	165,164	191,128

* Including capital repayments † At date of absorption by City Deep Ltd.
‡ Includes capital repayments of £538,335 § Includes capital repayments of £420,000 *a* Includes capital repayments of £945,000 *b* Includes capital repayments of £105,000

COMPANY NEWS AND VIEWS

Selection Trust's Investment Values Doubled

Due largely to the rise in price of American Metal common shares during the year ended March 31, 1955, the market valuation of Selection Trust's quoted shares rose to £21,559,349 from £10,346,387. This strong hidden reserve position is enhanced by the large undervaluation of unquoted investments shown at a book figure of £658,284. That this figure should be infinitely higher is amply demonstrated by Mr. Chester Beatty's statement that the Trust's holding in Tsumeb Corporation alone is valued at about £3,000,000. During the past financial year there was a drop of some £600,000 to £2,000,000 in net liquid assets. But as the book value of quoted investments rose from £2,684,535 to £3,328,112 this movement would appear largely to have accounted for the decrease.

Consolidated profit earned in respect of the past year rose sharply to £2,204,112 from £1,577,041. After expenditure and taxation net profits were £1,102,086 (£678,025). A total of £699,586 (£575,525) was transferred to reserve and dividends absorbed £661,031 (£548,911). Unappropriated profits carried forward rose to £453,197 (£414,642).

One or two points of particular interest arose from Mr. Chester Beatty's statement to shareholders. While disclosing that the Trust's main dividend earners continued to make excellent progress during the current year, he stated that it should be possible to maintain the current rate of dividend on the recently increased ordinary capital. An interesting hint towards a further distribution of fully paid shares was contained in his disclosure that such a possibility would be borne in mind when the current year's distribution came under consideration.

Referring to Bikita Minerals, the Southern Rhodesian lithium-beryllium property, Mr. Beatty stated that as the financing of the company was mainly by way of interest bearing loans which had to be repaid out of profits, dividend distributions were unlikely for some years. It will be recalled that both the American Metal Company and American Potash and Chemical Corporation are financially interested in this undertaking. As contracts are being entered with an American company owned jointly by Bikita and America Potash for the sale of lithium bearing ores, the future of Bikita as a substantial dollar-earner is most promising. Selection Trust's ordinary shares now stand at about 86s. as against their low point of 34s. in 1954. Meeting, London, July 14.

Tanjong and Kinta Pay Additional Interims For 1954

Although this is not the first time in the histories of Tanjong Tin Dredging and Kinta Tin Mines that five dividends have been paid in respect of one financial year instead of the more usual four, it has come as a most pleasant surprise that both companies have made further interim declarations for the year ended December 31, 1954, at a time when it will have generally been assumed that no more would be forthcoming. It may well have been the most promising current outlook for these companies which prompted the increased distributions. Indeed, figures showing production results achieved during the first five months of the current financial year have been most promising and reveal that substantial increases in output have taken place in both cases. Marketwise the companies' improved outlook has raised Tanjong shares from a low level of 10s. 7d. this year to 14s. 9d. xd. while those of Kinta have advanced from 10s. 4d. to 13s. 9d. xd. at which prices they return over 18½ per cent and about 15½ per cent respectively.

In the case of Tanjong Tin Dredging an interim dividend amounting to 20 per cent on the issued ordinary capital of £185,834 in shares of 5s. has brought total distribution in respect of the year ended December 31, 1954, up to 55 per cent from the previous figure of 47½ per cent. Output of tin concentrates during the past financial year was virtually unchanged from that of the preceding twelve months at 776 tons as against 780 tons.

Year to Dec. 31	*Total Revenue*	*Taxation*	*Net† Profit*	*Dividends*	*To Reserve*	*Carry Forward*
	£	£	£	£	£	£
1954	334,792*	88,000	31,257	57,144	1,000	23,402
1953	336,008	90,200	43,725	47,852	Nil	46,707

* Excluding £3,582 Insurance Refund.
† After £30,854 written off (1953 - £10,220.)

Five months operations of the current financial year shows output considerably increased to 395 tons from 282 tons and favourable outputs should continue.

Kinta Tin Mines has declared a further interim dividend of 10 per cent on its issued ordinary capital of £120,000 in shares of 5s. thus raising its total payment in respect of the year ended December 31, 1954, to 42½ per cent as compared with 32½ per cent previously. Production during the year rose to 352 tons of tin concentrates from the previous figure of 339 tons.

Year to Dec. 31	*Total Revenue*	*Taxation*	*Net Profit*	*Dividends*	*To Reserve*	*Carry* Forward*
	£	£	£	£	£	£
1954	163,066	40,275	32,255	28,350	1,000	21,782
1953	160,910	43,145	15,642	21,150	Nil	18,877

* After £4,148 written off. (1953 - £19,692).

During the first five months of the current financial year there has been a marked advance in output and a total of 151 tons of concentrates recovered compares with 120 tons during the previous corresponding period. With the transfer of all plant and equipment to the Damale section which will soon be completed, a satisfactory rate of production should be maintained.

Second interim dividends in respect of the year ending December 31, 1955, have also been announced for both companies. In the case of Kinta, his payment amounted to 10 (7½) per cent while that for Tanjong was 12½ (7½) per cent.

Mr. A. G. Glenister is chairman of both companies. Meetings, London, July 14.

Sungei Kinta Again Pays 5 Per Cent

A dividend of five per cent has once more been recommended by Sungei Kinta Tin Dredging on its issued ordinary capital of £200,000 in £1 stocks units for the year ended December 31, 1954. Net profits after transferring £25,000 from depreciation provision and charging an amount of £55,608 in respect of dredge repairs, was £5,039 as compared with £7,992.

It will be recalled that during the past financial year there was a heavy curtailment of operations due to the necessity of replating the company's dredge. Some four months of productive time were consequently lost and output of tin concentrates dropped to 161 tons from the preceding year's total of 224 tons.

Now that this repair work, which has been overhanging the company for some years, has apparently been successfully completed, current prospects are much brighter. So far, during the present financial year, a total of 106½ tons of concentrates have been produced, which compares with 119 tons during the previous corresponding period. On the assumption that operations during the coming months proceed without interruption, it would not be too optimistic to look for a total year's output in the region of 230 tons. And while this figure is very much below the output levels which have been achieved in the past it does, bearing in mind the current firmness in the price of tin, represent an earning potential of considerable proportions. It would appear, therefore, that a return to the 1952 distribution of 10 per cent might easily be on the cards. Reflecting this possibility the £1 stock units of Sungei Kinta have advanced from their low point of 11s. this year to a present level of about 12s. 9d., at which price they return some 7½ per cent. Assuming a doubled dividend for the current year however, the notional yield would be about 16 per cent. This would seem to indicate that the present price of these shares has gone high enough for the moment.

African Land and Investment Pays More From Lower Profits

A dividend of 21¼ per cent has been declared by the African Land and Investment Co. on its issued ordinary capital of £37,500 in ordinary 6s. 8d. shares. This marks an increase of 3¾ per cent over the previous year's distribution. Estimated profits for the year ended June 30, 1955, are £31,409 as compared with £38,487.

British Borneo's Investments

Speaking at the meeting of British Borneo Petroleum Syndicate, Mr. Malcolm Maclachlan, the chairman and managing director, stated that the greater part of the syndicate's interests lay in the oil industry which continued to expand and prosper.

In addition, however, the company had a number of general investments and he gave the following analysis figures to illustrate the company's investment position. Based on Stock Exchange valuation at the date of the latest balance sheet, oil stocks represented at 64 per cent of quoted investments; mining finance and mining companies 22 per cent; Home industrials 10 per cent and American securities 4 per cent. Mr. Maclachlan stated that the company would continue to build up its investments with a view to the future expansion of dividend income.

Rose Deep's Third Reduction of Capital.—The Special Resolution providing for the reduction of the capital of the Company to £490,000 in 700,000 shares of 14s. 0d. each and the return to shareholders of 3s. 0d. per share in cash, duly passed at the Ordinary General Meeting of the Company in Johannesburg on May 9, 1955, has now been confirmed by an Order of the Supreme Court of the Union of South Africa which will be registered on June 30, 1955, whereupon the reduction will immediately become effective.

The repayment of 3s. 0d. per share in cash will be made to shareholders registered in the books of the Company at the close of business on June 30, 1955, and to persons presenting Share Warrants to Bearer in circulation on that date.

The return of capital is payable in South African currency and becomes due on July 1, 1955.

Mine Returns

COAL OUTPUT

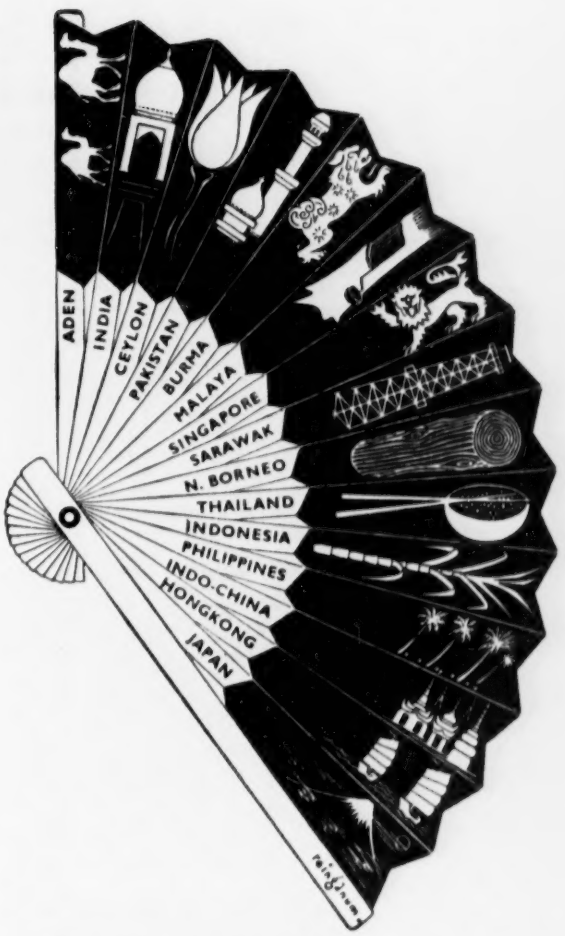
Company	April 1955 (in tons)	Months Since Year End	Cumulative Totals (in tons)	
			This year to date	Last year to date
Amal. Coll. of S.A.	576,398	4	2,300,724	2,264,133
Apex	85,046	4	336,016	314,360
Blesbok	43,178	4	167,876	181,615
Coronation	89,283	4	365,575	355,618
New Clydesdale	74,126	10	735,740	715,999
New Largo	100,623	4	335,859	282,910
S.A. Coal Est.	130,883	10	1,350,425	1,363,495
Springbok	69,964	4	288,302	274,396
Transvaal & Delagoa	116,534	8	1,073,811	968,601
Van Dyks Drift	67,201	4	248,727	198,073
Vierfontein	108,839	4	424,943	271,104
Vryheid Cor.	47,063	4	185,672	164,241
Vryheid Cor.*	35,990	4	145,052	136,357
Wankie Coll.	254,741	8	2,288,316	1,599,388
Wankie Coll.*	16,859	8	134,539	91,515
Witbank	150,655	4	593,093	554,019

* Coke

TIN OUTPUT IN TONS OF TIN CONCENTRATES

Company	April	Months since year end	Financial Year to Date	
			This	Last
EASTERN				
Ampat	§97½	4	428½	386
Berjuntai	71	12	725	666
Ipoh Tin	26	1	26	35½
Kinta K.	15	1	15	17½
Kinta T.	33	4	120	95½
Klang River	20½	1	20½	40½
Kuala K.	171½	1	171½	186
Kuchai	63	7	331½	169½
Larut	93½	4	380	317½
Lower Perak	192	12	2034½	1500½
Malaysiam	13	1	13	9½
Pahang	225	9	1965	1980
Rahman H.	31	10	349½	397½
Rantau	49½	10	604½	661½
Rawang Conc.	27½	1	27½	59½
Rawang Tin	145½	1	145½	48½
Renong	68	10	967	951
S. Kinta	293½	1	293½	479½
Siamese Tin	178	4	743	**
Sungei Kinta	24½	4	79½	81½
Taiping	56½	4	225½	222½
Tambah	10	4	52½	81
Tanjong	77½	4	335½	224½
Tongkah	56	10	386½	349½
NIGERIA				
Amal. Tin	333	1	333	308
†Amal. Tin	70	1	70	48
Bisichi	89	4	307	189
NIGERIA				
†Bisichi	41	4	171	73
Ex-lands	57	4	234	252
Gold & Base	45	4	180	165
†Gold & Base	15½	4	59½	35½
Jantar	20	7	144	118
†Jantar	9	7	116	124
Kaduna P.	5	4	24	26
Kaduna S.	30	4	106	96½
Keffi	Nil	1	Nil	6½
†Keffi	49	1	49	25
Lond. Nig.	22½	1	22½	16
Naraguta Ex.	5	4	22½	15½
Naraguta K.	7½	4	47½	61½
Naraguta T.	10	4	54	70½
†Naraguta T.	7	4	30	30
Ribon	15½	1	15½	6
†Ribon	1½	1	1½	—
S. Bukeru	5½	4	26½	27½
†S. Bukeru	1	4	3½	2
Tinfields of Nig.	1½	1	1½	2½
†Tinfields of Nig.	4	1	4	2½
U. Tin	8	10	123½	76
†U. Tin	2½	10	33	1½
MISC.				
Beralt Tin	10	1	10	3
‡Beralt Tin	167	1	167	130
Geevor	52	1	52	53
Sth. Crofty Tin	53	4	214½	202½
‡Sth. Crofty Tin	Nil	4	1½	3½

* Quarterly
† Columbite
‡ Wolfram
§ Kent dredge closed 11 days for repair to bucket ladder.
** Not comparable



Spanning the East

Branches of The Chartered Bank of India, Australia and China under British management directed from London are established in most centres of commercial importance throughout Southern and South Eastern Asia and the Far East. At all these branches a complete banking service is available and, in particular, facilities are provided for the financing of international trade in co-operation with the Bank's offices in London, Manchester and Liverpool, its agencies in New York and Hamburg and a world-wide range of banking correspondents.

In London and Singapore the Bank is prepared to act as executor or trustee.

THE CHARTERED BANK OF INDIA, AUSTRALIA AND CHINA

(Incorporated by Royal Charter, 1853)

Head Office: 38 Bishopsgate, London, E.C.2

ANGLO AMERICAN CORPORATION OF SOUTH AFRICA, LIMITED

(Incorporated in the Union of South Africa)

YEAR OF PROGRESS AND CONSOLIDATION

PROBLEMS OF STAFF RECRUITMENT

SIR ERNEST OPPENHEIMER'S STATEMENT

The following are extracts from the statement by the Chairman, **Sir Ernest Oppenheimer,** which has been circulated to shareholders :—

The year 1954 was a satisfactory one for the Corporation. We increased our revenue under all headings, and our profit, after taxation, was over £4,000,000—some three-quarters of a million more than in 1953. We were able to add further sums to the general reserve which now stands at the substantial figure of £20,000,000, and at the same time to increase our dividend distribution to the Ordinary shareholders from 6s. to 7s. a share. Our cash position remains strong, and our quoted investments, which stand in our books at £24,000,000, had a market value at the end of 1954 of £60,800,000—a considerable advance over the previous year. The year 1954 was also one in which we were able to consolidate our position in respect of many of our investments, as market conditions generally were favourable.

PROBLEMS CONFRONTING MINING INDUSTRY

In mining, as in other industries, we have to face three types of problem—financial, technical and human. In the past few years our major problem has been financial. The sums required for the establishment of the gold mines in which we are interested in the Orange Free State and the Klerksdorp area were very considerable indeed, and, in the statement I issued with the 1953 accounts, I reviewed how we had solved this problem, and what we had achieved. Financial problems are, of course, always with us but, because of the great prosperity being experienced by the diamond and copper industries and the sound basis on which our gold and coal interests have been financed, our financial requirements for the time being are of a routine nature and magnitude. We have, moreover, considerable reserves available for any new and profitable business that may arise, and we are ever on the lookout for new openings and opportunities.

In the technical field conditions are not dissimilar. The gold mining industry has met triumphantly the great challenge set by the construction of vast uranium and acid plants at the highest possible speed. The difficulties inherent in opening up any new mining field such as the Orange Free State, are gradually being overcome and solved. In the diamond and copper fields, and particularly at the Wankie Colliery, our major programme is well advanced towards completion. Technical improvements there always will be; there do not, however, appear to be any technical problems confronting us in the next few years that we cannot face with complete confidence.

It is towards the solution of the third group of problems, the human problems, that our greatest effort will perhaps need to be directed. It is becoming more and more difficult to get enough men and women to carry on uninterruptedly the development of this great and rich country.

The local population is rising to great heights, but is simply not big enough to face up alone to the job. The gold mines have today a better supply of native labour than they have had for very many years, but more than half of this labour comes from outside the borders of the Union and for its continuance we are dependent upon the goodwill and the needs of our neighbours. The white peoples of the Union and the federated territories of Rhodesia are enjoying full employment; in fact there are grave shortages of qualified men at all levels, and in nearly all industries and Government Departments.

STAFF RECRUITMENT

The mining industry is making every possible effort to recruit and train men locally, and is offering training facilities even to university degree standard in its efforts to staff its enterprises. The population of South Africa is, however, clearly too small to meet the opportunity, and the Corporation has had to look further afield and we have appointed a recruiting officer in England. To assist in recruiting we recently brought to Southern Africa a party of some 20 educationists from Great Britain who, it is hoped, will influence young men to join our ranks.

We are offering free university training to suitable candidates. Neither are our efforts confined to Great Britain, for we have recently recruited technical officers from Scandinavia and from Australia, from Switzerland and Canada.

In the Central African Federation the European population is still very small, and both on the copperbelt and at Wankie our European establishment must be drawn largely from outside the Rhodesias, mainly from South Africa and from Great Britain. In order to help the young men and women of Northern Rhodesia we have decided in association with the Rhodesian Selection Trust, to set up on the copperbelt a foundation, which will establish a technical college and take such other steps as its governors may judge necessary to make available the highest technical education.

The African population in the Federation must also be trained to play its part in the world of industry. African training on the mines is being constantly developed, and the recognition of the African Mineworkers' Staff Association marks a step forward in the development of the African population towards higher responsibilities and skills. Our long discussions on the subject of African advancement into a range of work that had traditionally been the preserve of the European have been greatly assisted by a statement from the European Mineworkers' Union, who are willing to co-operate in making a start with African advancement, which I welcome particularly as a genuine and valuable contribution towards this difficult problem.

Both in Rhodesia and in the Union of South Africa we are struggling with the problem of finding a way of living that provides a justice and opportunity to peoples of two races—and of two levels of civilization.

SEARCH FOR NEW ECONOMIC MINERAL DEPOSITS

I should now like to refer briefly to another branch of the Corporation's activities which is vital to our continued existence. I refer to our prospecting activities in the search for new economic mineral deposits.

A considerable programme of prospecting has been laid out for the whole of Southern Africa, not merely covering areas where concessions or exclusive prospecting rights are held; and modern methods and techniques are being applied to very considerable areas in the hope of making some useful discoveries. While it would not be appropriate, at this stage, to make any more detailed reference to the work we are doing and to the areas where we are carrying it out, I can say that we are sparing no expense in conducting extensive research under the guidance of the experienced staffs of our geological and engineering departments, which have been considerably enlarged for this purpose. May I conclude this statement on a personal note? I have recently passed my 75th birthday and have also had, for a few weeks, to detach myself from the daily round of business and to take a longer rest than I have enjoyed for many years. During this period my thoughts have gone back to the establishment of the Corporation, 38 years ago, and to the men who have helped me to build it up into the great institution that it is today. I feel a great debt of gratitude to those who were by my side in the early and difficult years, and to the staff which is today so vigorously and ably carrying on our business.

Copies of the Chairman's Statement and of the Annual Report and Accounts can be obtained from the London Office of the Corporation, 11 Old Jewry, E.C.2.

AGENCE MINIÈRE ET MARITIME S A
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CENTRAL MINING AND INVESTMENT CORPORATION, LIMITED

FIFTY YEARS OF PROGRESS

STEADY EXPANSION OF GOLD MINING INDUSTRY'S OPERATIONS

The Fiftieth Annual General Meeting of Members of the Central Mining and Investment Corporation, Limited, was held at 1 London Wall Buildings, London E.C.2, on Monday last.

The Rt. Hon. Lord Baillieu, K.B.E., C.M.G., Chairman of the Company, who presided said :—

On October 1, 1954, it was our pleasure to welcome to membership of the Board Mr. W. M. Frames, Mr. S. D. H. Pollen and Mr. T. Muir Warden. Mr. Frames is resident in South Africa where he has occupied over a long period various responsible appointments in our organization and in recent years has been Assistant General Manager. Mr. Pollen and Mr. Muir Warden, who are resident in England, bring to the Board the benefits of comparative youth as well as considerable experience of the Corporation's affairs.

Mr. W. H. A. Lawrence retired from the Board and from the Chairmanship of Rand Mines Ltd. on December 31 last after more than 35 years' service with the Group in South Africa. During the last seven of these years, Mr. Lawrence had discharged the onerous duties of General Manager of the Corporation's activities in Southern Africa, a position in which he is now succeeded by Mr. Frames. Apart from the notable service that he rendered to our Group, Mr. Lawrence had been a member of the Gold Producers' Committee of the Transvaal Chamber of Mines from 1938 until 1954 and had served for two years during the war as its President. I am sure you would wish me to convey your thanks to Mr. Lawrence and your good wishes for his health and happiness in his retirement.

JUBILEE

On May 9 the Corporation celebrated the Golden Jubilee of its founding in 1905 by the partners of Wernher, Beit & Co., a firm which played a very conspicuous part in the early development of both Kimberley and Johannesburg. To mark this occasion we have prepared a brochure which, mainly in pictorial form, records the major activities of the Central Mining-Rand Mines Group of companies. We intend to circulate the brochure to shareholders, members of the staff and business associates along with copies of my statement to-day. The brochure will serve more clearly than any words of mine to inform members of the wide spread of our activities developed over a period of 50 years. Our hope is that as a result of our stewardship our successors in 50 years' time will be able to record further progress and expansion.

Turning for a moment to the past, it is perhaps worthy of record that it was the intention of the founders of the Corporation that it should endeavour to pay a regular dividend of 5% on the equity and thereby provide a form of stable investment in the normally speculative business of mining. If conditions warranted it, of course, additional distributions were to be made by way of bonus. In the event the Corporation has been able to provide some measure of stability but it has proved impossible to insulate its activities from the impact of crises such as the two world wars and the great depression of 1930/31. Still, some satisfaction may be derived from the fact that since the year 1932 the distribution on the equity has never been lower than 5%.

ACCOUNTS

The Accounts now under review, read in conjunction with the Directors' Report, are largely self-explanatory. They indicate that in 1954 the Corporation had a good year though the bloom has been removed to some extent by the incidence of taxation. Despite considerable activity on the stock markets during 1954 we have added somewhat to the book value of our portfolio of investments and there has been some change in its composition. We have acquired the whole capital of a company owning a site which we intend to develop in the business area of Johannesburg.

Among the current assets you will observe that there has been some change of interests. The value of Government securities (which include Treasury Bills) at £7½ million is about £7 million lower than at the end of 1953. This is explained by our taking advantage of the more favourable rates of interest on deposits offered by the Commercial Banks in South Africa than those obtainable on Treasury Bills. Hence the increase in the amount of cash on deposit.

It is, of course, our custom to maintain a surplus of current assets over current liabilities and provisions, and to ensure the liquidity of the deposit and current accounts of our associated companies. This surplus at December 31 last was over £3.1 million or nearly £1 million more than at the end of 1953. Accordingly, we are in a position of considerable strength. The Board has allocated £550,000 to Reserve thus contributing to the expansion of the Group's net assets from £10.9 million to £12.1 million.

GOLD MINING IN SOUTH AFRICA

The year 1954 saw a steady expansion in the scale of operations of the Gold Mining Industry and the results reflect a satisfactory achievement. In considering them we have to bear in mind the importance to the Industry of general economic conditions in South Africa and in assessing the future it is useful to glance at the trends which have become apparent over the last few years. The Gold Mining Industry—and for the moment I exclude uranium production—operates under a fixed price for its product. During a cycle of rising costs it can pass on no part of its increased expenditures; nor, by and large, can the individual mines readily balance an increase in costs by mining a higher grade of ore—except by the sacrifice of lower grade blocks which, by themselves, cannot economically support the overhead, as well as the working costs of extraction. Since the war costs have risen sharply but in 1954—for the first time since 1950—the increase in aggregate working revenue exceeded that in aggregate working costs. This was largely due to expanded production from the Orange Free State but, at the same time, the Witwatersrand mines were able to accomplish a greater tonnage milled and the principal contributory factor to the enlarged scale of operations was the substantial improvement in the supply of native labour—an improvement which, I am glad to say, has been sustained in 1955. At the beginning of January, 1954, the number of natives employed stood, in round figures, at 275,000; by May it had reached a seasonal peak at 314,000; at the beginning of January this year it was 298,000 and at the beginning of this month it stood at 326,000. The effect of the better native labour supply, even though it was not matched by a proportionate increase in white labour, was to permit the total tonnage milled by the industry to rise to 62½ million tons—the highest figure since 1942.

An expansion of this magnitude in actual mining and milling naturally puts strain upon ancillary services such as electricity supply and rail transport as well as making greater demands upon the producers of such essential commodities as cyanide, cement, coal, lime, timber and explosives. From time to time during the past twelve months there have, of course, been complaints over shortages, but whatever shortcomings there may have been in the provision of supplies and services, these have not reversed the general trend towards enlargement of operations. Since 1952 the Government in South Africa has been pursuing measures designed to remedy the disparity between capital works and secondary industrial expansion which grew up in the immediate post-war years. Government departments, provincial administrations and public utility Corporations have gone a long way towards meeting the most urgent demands for such vital services as power, telecommunications, housing, roads and water supply; and although the backlog in transport has not yet been overhauled the Railways Administration has invested more than £120 million in new works and additions to equipment in the last six years. In overseas trade the Union has shown satisfactory results for 1954 with a surplus on visible trade account of £50 million and, for the first time for several years, a favourable net balance of payments of £44 million after taking account of invisible imports and of the inflow of foreign capital. Internally, the level of public and private savings rose to an estimated £220 million in 1954 compared with an average of £170 million over the past five years and there has been a noticeable trend towards greater participation in capital formation by public or semi-public institutions.

The country is now comparatively free from internal inflation and it may be suggested that its economy is beginning to pass from the period of "consolidation"—which started in 1952—into one of "stability" during which additional benefits will be reaped from the completion of the long-term projects now in hand. This economic progress is of vital importance to our principal industry in South Africa and to those companies other than gold and uranium mines in which we have a substantial stake. Here I refer, of course, to our coal, cement, lime and timber interests.

On the mining side, 1954 marked a great advance in the production of uranium. At the end of that year 13 companies were producing and profits from uranium rose from under £2 million in 1953 to over £8 million in 1954. It is not possible from published information to determine the extent of the benefit derived by the Union from uranium extraction plants,

but that it is growing rapidly is indicated by the Department of Customs and Excise figures which show exports of uranium and thorium of £4 million in 1953, £15 million in 1954 and nearly £6 million in the first three months alone of 1955.

The Orange Free State goldfield continued to open up impressively, although development results show that within the field there is a wide variation in the fortunes of the individual mines. In general, operations continued to be impeded by faults, water fissures and other difficulties peculiar to the area but, as the experience gained is turned to advantage and new techniques are developed, these difficulties will become progressively less formidable. The output of this goldfield more than doubled by comparison with the previous year, rising from 3.8 per cent to 8.7 per cent of the total Industry gold production. The percentage has risen substantially again this year and stood at 13.9 per cent for the first five months of 1955.

Of our Central Rand and Eastern Transvaal gold mines there is little that I can add to the information given in the Directors' Report. Many of these famous old mines began production between the closing years of the last century and the beginning of the first World War. Hence, you will I feel agree that it is not surprising if, after a half-century of profitable operation, several of them are in or near the closing stages of their careers. Rather would it be a matter of surprise were the picture other than it is. In this long vista of years the managements have had to face many difficult times; the problems facing them today in maintaining operations in these deep and nearly worked-out mines are not less difficult.

I would refer, however, to the young and vigorous Orange Free State Harmony mine, where production of gold began last September—four years from the start of shaft sinking—and where the production of uranium is now under way. Much has yet to be done to establish this promising property on a firm basis through widening the explored area and thus acquiring better knowledge of reef characteristics and gold distribution, through gaining flexibility in stoping operations and increasing production. Progress to date, however, is encouraging and is welcome in that this new mine offsets, in some degree, the inevitable contraction in numbers of our Group mines.

The capital funds raised by Harmony in November, 1953, by an offer of convertible notes and shares to shareholders were exhausted in the latter part of 1954 and since that time the Corporation and Rand Mines Ltd. have made available to the Harmony Company short-term loan facilities in order to enable that Company to carry on its capital expenditure programme for production on the basis of a 90,000 tons per month milling capacity.

COLLIERIES AND INDUSTRIES

The two collieries in the Group again earned reasonable profits having regard to the continued adverse effects on operations of the inadequate South African railway facilities. The Railways Administration, as I have mentioned, is speeding up its expansion programme and we hope that this will in due course be of help not only to the collieries but also to our industrial companies.

The principal industrial companies of the Group all experienced satisfactory trading conditions in 1954. The main points of interest in the operation of S.A. Forest Investments Ltd. were dealt with in our Annual Report but, since the financial year for the cement, lime and Hume Pipe companies ends on June 30, I am not today in a position to give you a detailed comparison between their results for the current year and those for the 12 months ended June, 1954.

OIL

We continue to maintain our interest in the oil industry through our investment in Trinidad Leaseholds Limited. As you will be aware, two of the many outstanding features of the development of the oil industry in the past 10 years have been firstly the spectacular increase in oil production in the Middle East, with a parallel remarkable development of oil refining facilities in the United Kingdom and Western Europe, based largely on the use of this Middle East crude oil. Then, secondly, the discovery and development of rich new fields in Western Canada which have already changed and promise long to continue to influence oil supply and distribution patterns in northern North America. There are of course many other important features one thinks of in this vast ever-changing industry—the growing use of giant oil tankers, the network of major—even continental—oil and gas pipelines, the continuous pressure for new and expensive processes to yield ever higher grade refined products, and the new world of petro-chemicals. However, enough has been said to indicate to you the great capital investments required to maintain even a small position in this giant industry.

In the two outstanding oil industry developments I have mentioned above, the interests of Trinidad Leaseholds have naturally been involved. In regard to the first, Trinidad Leaseholds in conjunction with our good friends the large international Caltex Group are, I am glad to say, successfully meeting the resulting intense marketing competition throughout the United Kingdom, while for the Canadian scene, we feel that Trinidad Leaseholds has established a firm bridgehead from which to continue to expand.

May I conclude by expressing in no formal way our thanks to the large staff which in various parts of the world are engaged upon the Corporation's affairs. We greatly appreciate the services they so loyally render.

The report and accounts were unanimously adopted, and the final dividend of 2s. per share, making 2s. 9d. for the year, was approved.

MOND NICKEL MANAGEMENT CHANGES

The Mond Nickel Company Limited announces the following management changes, effective from May 19: **Mr. L. K. Brindley** has been elected deputy chairman of the boards of the Mond Nickel Company and Henry Wiggin and Company; **Mr. G. Archer** has been elected managing director of the Mond Nickel Company; **Mr. I. A. Bailey** is moving his headquarters from Birmingham to London where he will continue as a director of the Mond Nickel Company and as managing director of Henry Wiggin and Company; **Dr. L. B. Pfeil** has relinquished the managership of the Development Research Department in order to devote himself more fully to directorship responsibilities; **Mr. R. A. R. Hill** has been elected a director of the Mond Nickel Company and to the offices of comptroller of the Mond Nickel Company and of Henry Wiggin and Company; **Mr. F. B. Howard-White** has been elected a director of Henry Wiggin and Company and secretary of the Mond Nickel Company and of Henry Wiggin and Company; **Mr. J. O. Hitchcock** has been elected a director of the Mond Nickel Company and appointed sales director; **Mr. F. Dickinson** has been appointed manager of the Development and Research Department; **Mr. A. P. Hague** continues as a director of the Mond Nickel Company and Henry Wiggin and Company; **Dr. A. G. Ramsay** continues as a director of the Mond Nickel Company, resident in South Wales.

WOLVERHAMPTON DIAMOND
DIE & TOOL Co. Ltd.

BOARTS
and
INDUSTRIAL
DIAMONDS
Exporters

11 HATTON GARDEN,
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ST. JOHN D'EL REY MINING CO.

The Ordinary General Meeting of the St. John d'el Rey Mining Company Limited was held at Winchester House, Old Broad Street, London, E.C.2, on Tuesday last.

The Right Hon. Lord Rathcavan, P.C. (Chairman), who presided, in the course of his speech said:

Though there was some improvement in the results for 1954 when compared with those of 1953 (itself one of the worst years in recent times), 1954 has been a very difficult year for the Company and the Board have had little or no control over many of the problems which have affected us. Labour, in the period under review, was comparatively quiet and there were no actual stoppages in 1954, but we have just had a strike of all underground workers which lasted for 19 days. Output per man per shift is still far from satisfactory and this failure on the part of the workmen to give of their best is the one factor, more than any other, which is responsible for our present difficulties. Owing to the continued depreciation of the Cruzeiro, the value of the gold sold was approximately £293,000 less than in 1953, despite an increase in tonnage crushed of 5,500 tons and of 174 kilos in the gold produced. This fall in revenue was accompanied by a further substantial decline in working costs (also due to exchange) which show a reduction of some £415,000 compared with the previous year. The Net Profit, after debiting cost of Development and Depreciation, together with Taxation and London Expenses, amounts to £54,231. From this sum £14,099 has to be deducted for loss on exchange on our Investments in Brazil, which, with £28,505 brought forward from 1953, leaves £68,637 to be dealt with. The Board recommend a Dividend of 2½ per cent net on the Ordinary Stock and have decided to carry forward £43,102 to next year's accounts.

The tonnage treated during the year amounted to 316,800 tons. The average grade was 11.60 grammes (7.46 dwt.) and the value of the Bullion produced was £1,466,270. The rate of production of ore per man per day again shows a further substantial decline being 458 kilos compared with 485 in Morro Velho and 660 against 722 in the Espirito Santo Group. This drop in production is all the more disappointing when it is borne in mind that the Minimum Wage was more than doubled in the middle of the year.

That part of the Company's gold which is sold on the free market in Brazil was disposed of without difficulty at prices ranging from Cr$67,00 per gramme at the beginning of the year to Cr$92,00 in December.

The ore reserves at the end of the year amounted to 7,042,000 tons made up as follows: Morro Velho 5,156,000 tons of an average value of 13.6 grammes (8.7 dwt.) and Espirito Santo 1,886,000 tons of an average value of 9.6 grammes (6.2 dwt.).

Mr. Altshuler, our Consulting Mining Engineer, paid his first visit to the property in June, 1954. As a result of his report, and taking into account the heavy increase in the Minimum Wage, the Board decided to postpone for the present the full projected Capital programme and to approve a modified scheme known as the "Partial Plan." The Partial Plan aims at an early increase in production up to a total of from 40,000 to 45,000 tons per month, and if we could attain this, many of our difficulties would be solved.

Capital expenditure on the modernization of plant and equipment can do much, but in the last resort, all depends on the productivity of Labour.

As regards current prospects, there is little I can tell you beyond what you already know from the progress report sent out with the Annual Report. You will see that in March, when we got better production, there was a reasonable surplus. April gave a production of 26,366 tons and a surplus of £12,100 May will, of course, show a deficit owing to the strike, and what happens in the second half of the year depends on two factors—the volume of production and the extra charge we may have to meet in insalubrity pay.

I'm afraid that the report I have had to make on existing conditions at our properties will not give much encouragement to Stockholders, but I think I ought to remind you that there is another side to the picture. First, we have a truly wonderful mine which in spite of its long history over the last 125 years has to-day proved ore reserves of 7,042,000 tons of an average value of about 8 dwt. In addition, we have considerable dumps of old tailings containing an appreciable quantity of gold which we hope to be able to treat before long with the help of a Fluo-Solids roasting furnace now on order.

Apart from the mines themselves, we have a property extending over an area of some 130 square miles which contains many millions of tons of high-grade iron ore. At the moment there is little market for this iron ore owing to lack of transport to the coast, but its potential value in the future must be very great.

The report and accounts were adopted.

SELECTION TRUST LIMITED

Summary of Annual Report

for the Year ended 31st March, 1955

CONSOLIDATED RESULTS

		(1954)
Revenue	£	£
Dividends and Interest from Investments	1,978,387	1,475,385
Profit on Realisation of Investments	176,788	42,491
Sundry Revenue	48,937	59,165
	2,204,112	1,577,041
Expenditure	69,213	68,547
	2,134,899	1,508,494
Taxation (after adjustments for previous years)	1,032,813	830,469
Net Profit	£1,102,086	£678,025
The **Net Profit** has been utilised as follows :—	£	£
Transfers to Reserves	402,500	102,500
Dividends	661,031	548,911
Added to Unappropriated Profits	38,555	26,614
	£1,102,086	£678,025
Exploration Reserve was charged with Exploration Expenditure amounting to	£129,002	£92,876
Dividends per unit of stock (gross)	5s. 0d.	4s. 3d.

It is proposed to issue one fully-paid share for every 20 stock units held.

CONSOLIDATED FINANCIAL POSITION

Capital and Reserves	£	£
Issued Capital, 4,484,797 stock units of 10s.	2,242,399	2,242,399
Reserves	2,701,946	2,416,702
Interest of outside Preference Shareholders in Subsidiary	1,015,000	1,012,500
Debenture Stock outstanding	148,088	153,499
	£6,107,433	£5,825,100
Assets	£	£
Net Current Assets	2,015,419	2,599,278
Quoted Investments at book value	3,328,112	2,684,535
Unquoted Investments at book value	658,284	436,342
Freehold Property and other assets	105,618	104,945
	£6,107,433	£5,825,100

The quoted investments appearing at £3,328,112 had a market value on the basis of Stock Exchange prices at March 31, 1955, of £21,559,349.

The unquoted investments appearing at £658,284 included the holding in Tsumeb Corporation which stands in the books at £35,639 but which, valued on an arbitrary basis, is worth about £3,000,000.

INVESTMENTS

Selection Trust is principally interested, directly or indirectly, in the following companies :—

African Selection Trust (Proprietary)
American Metal Company
Bikita Minerals (Private)
Consolidated African Selection Trust
Mufulira Copper Mines
Rhodesian Selection Trust
Roan Antelope Copper Mines
St. Helena Gold Mines
Selco Exploration Company
Seltrust Investments
Sierra Leone Selection Trust
Trepca Mines
Tsumeb Corporation
Vaal Reefs Exploration and Mining Company
Western Holdings

Copies of the Annual Report for the year ended March 31, 1955, may be obtained from the Secretary.

Selection Trust Building,
Mason's Avenue, London, E.C.2.

BANK OF BRITISH WEST AFRICA LIMITED

LORD HARLECH'S STATEMENT

DIVIDEND MAINTAINED

The Sixty-first Annual General Meeting of the Bank of British West Africa, Limited, will be held at the Office of the Company, 37 Gracechurch Street, London, E.C.3, on June 30.

The following is the Statement by the Chairman, **The Rt. Hon. Lord Harlech, K.G., G.C.M.G.,** which has been circulated to members with the report and accounts for the year ended March 31, 1955 :—

Since the last Annual General Meeting, Sir Sydney Parkes, C.B.E., and Sir Frank Baddeley, K.B.E., C.M.G., have retired from your Board, and to each of them I wish to express our thanks for the valuable service which they rendered to the Bank. We have been fortunate in securing as additional Directors, Mr. W. A. Action, Sir Eric Miéville, G.C.I.E., K.C.V.O., C.S.I., C.M.G. and Mr. G. Y. Hinwood, who bring a wide and valuable experience to our Board table.

Mr. E. Whitley-Jones has been elected a Deputy Chairman.

In January I went to the Gold Coast on your behalf. In view of the rapid changes which have been taking place there the visit was of exceptional interest.

I talked with many members of our Staff. From our District Manager to our newest junior clerks we have a degree of loyalty which could not be surpassed, and everywhere I found a standard of keenness and of determination to progress which reflects great credit both upon the men whom we employ and upon the conditions of service which we offer.

It is with regret that I inform you of the impending retirement of our General Manager, Mr. Frank G. Wright, which will take place at the end of August. As will be seen from the Balance Sheet figures, the Bank has made quite remarkable progress during the years he has been our chief executive, and our sincere thanks are due to him for his great achievements. I am pleased to say he will remain on the Board so that we shall continue to have the advantage of his wide knowledge and long experience of our business. Mr. John C. Read, Assistant General Manager, will succeed Mr. Wright as General Manager.

With this statement are included photographs of our new office on the Marina at Lagos, which was completed in February. It is a handsome building, worthy of any Capital city, and expresses our assurance in the development of Nigeria. We are sincerely grateful to Sir John Macpherson, the Governor-General, for having performed the formal opening ceremony, and we are indebted to Mr. E. Whitley-Jones, Deputy Chairman, who undertook the journey to Lagos to be present as our representative.

OPENING OF NEW BRANCHES

During the year new branches have been opened at Bukuru, Fagge Ta Kudu (Kano), Gombe, Ikeja, Nguru, and Uyo in Nigeria, and at Tema in the Gold Coast. Our programme continues with the building of office premises and accommodation for the staff.

It is in no manner a formality that once again I express thanks to our staff in the United Kingdom and Overseas for the good service they have rendered in the interests of the Bank. They are, I know, intensely proud of the growth of our business and I am very well aware of the zeal and enthusiasm which they apply to their duties. While we endeavour to offer them the fullest encouragement, there is great opportunity for all those eager to fit themselves for responsibility and the higher posts in our service. Today the Bank offers a fine career both to Africans and Europeans.

The Balance Sheet and Profit and Loss Account are before you. The Balance Sheet total shows little change compared with last year but the profit figures are appreciably higher due to the larger volume of funds held during the greater part of the year and to the higher interest rates prevailing in London.

The Capital is unchanged as the proposals for increasing it and for dealing with the uncalled portion, unanimously approved by the Extraordinary General Meeting held in April, were not effective at the date of this Balance Sheet.

The Reserve Fund was increased to £1,400,000 by a transfer of £200,000 from Profits. After providing for the dividend the amount carried forward in Profit and Loss Account was increased to £127,690. Your Directors are of the opinion that the continued building up of Reserves is essential in view of the expansion in the Bank's engagements.

Current, Deposit and other Accounts are virtually unchanged at £78,823,505. There has been some diminution of official funds held by us but this has been offset by the deposits of the increased number of customers.

The provision for the dividend requires a slightly larger sum owing to the reduction in the standard rate of Income Tax.

Liabilities on Acceptances, Confirmed Credits and other Engagements on behalf of customers at £10,294,723 show an increase of £648,283.

On the opposite side of the Balance Sheet, Cash at £10,304,858 is higher by some £4,276,076, the balance held at the Balance Sheet date in 1954 having been exceptionally low. Money at Call and Short Notice at £22,500,000 shows a decrease of £3,325,000 and Bills of Exchange, principally Treasury Bills, at £22,268,373 show an increase of £542,730. Our liquid position is necessarily high as we have to be ready to meet the heavy seasonal demands which are made upon us.

Investments have been increased by £1,010,345 to the total of £14,837,170.

Loans, Advances and other Accounts at £11,428,742 are lower by £3,001,978.

As you are aware, dividends of a total of 10 per cent have been paid for the year, which is equal to the payments made for 1954, and it is not the Directors' intention to recommend any further dividend in respect of the accounts under review. The second interim dividend distributed in May was paid at that time instead of later in the year in order to simplify the carrying through of the changes in the Capital structure.

In Nigeria and in the Gold Coast the political structure has moved further toward complete local autonomy. Proposals have been made for the extension of the franchise in Sierra Leone and arrangements have been introduced for a greater African participation in Government in The Gambia. It must be recognized that these countries are passing through a formative period and experiencing the stresses and strains incidental to rapid development.

The price of cocoa having risen to astronomical figures has since been falling steadily but still sells at levels highly attractive to producer countries. The Marketing Boards and Government revenues have profited sandsomely. Both the Gold Coast and Nigeria have provided large funds for research into the problems of disease and pests but so far there is no indication that larger crops can be expected. While cutting out of affected trees has helped to curtail the spread of swollen shoot, capsid and black pod disease have levied a heavy toll. Short crops have created high prices but other producers are being attracted into the field and some consumer countries, notably the U.S.A., have been forced to develop the use of substitutes.

The shipping strike in the United Kingdom seriously disturbed the flow of merchandise to West Africa and hampered exports. The Lines have made strenuous endeavours to relieve the situation but much mid-season trade was lost and subsequent congestion of vessels in the ports tended to neutralize their efforts.

The textile trade has been difficult. Overstocking has been prevalent and the introduction of direct shipping facilities from Japan produced occasional bulk arrivals causing some embarrassment. Lancashire was one of the heavy sufferers through changes in the origin of supplies. Local profit margins were so fine that there was a further movement on the part of smaller traders towards local purchasing in place of direct importing.

The demand for education facilities grows yet more insistent. In spite of all the difficulties in providing buildings and trained teachers, good progress is being made, and the adoption of mass education schemes and the provision of free schools is showing very apparent results.

West Africa has enjoyed a long period in which her crops have commanded high prices abroad. Great strides have been made in the provision of public works and services and in raising living standards while an ample reserve of resources has been built up which, carefully used, can provide buoyancy to the economy for years to come. Desirable as it may appear to be possessed of a substantial manufacturing capacity, these are agricultural lands with a population of traditional farmers. It is to be hoped that the current enthusiasm for industrialization will not commit such a share of reserves as may deprive the territories of their ability to adjust themselves to sudden fluctuation in the price of their major exports.

I now refer separately to the four West African countries in which we are primarily interested.

NIGERIA

Our good wishes are extended to Sir John Macpherson on his retirement from the office of Governor-General after seven years of outstanding service to Nigeria, and our congratulations to his successor, Sir James Robertson.

The changes in the organization of Government introduced by the revision of the Constitution, have been brought into being but it is too soon to assess the effects upon the country. The rearrangement of the Marketing Boards upon a Regional basis has been successfully completed.

The report of the International Bank Mission provides a remarkable survey of the resources and potentialities of the territory. As a guide to those who may be responsible for Nigeria's future development it would have been a more helpful document had it prefaced every proposal with a reminder that manpower and technical knowledge are as essential to any scheme as the spending of money.

The railway has successfully dealt with the problem of improving its freight service and within a few months the groundnut pyramids in the North should become no more than a seasonal feature of the landscape.

The extensions of the Apapa Wharf are being carried out speedily and plans for the very necessary additional facilities at Port Harcourt are making good progress.

In the crops, the tonnage of groundnuts was about 13 per cent. lower but was nevertheless very good, cocoa was some 10 per cent. less and of lower quality, and in palm produce oil was nearly 4 per cent. down although offset by a record crop of kernels. With the fall in world prices of vegetable oils, it seems likely that the Northern and Eastern Marketing Boards may need to make some use of their reserves for the maintenance of their guaranteed prices to producers. The cotton crop has been very successful, while the production of timber and rubber has been much encouragd by better prices. The decision to restrict the supply of groundnuts to the crushers at Kano to a third of their capacity was a shock to the industry. The subsequent doubling of the quota for the season still leaves surplus milling plant.

A Colonial Office delegation visited Kano in September and held discussions with local interests with a view to effecting improvements in the quality of hides and skins.

The Regional Authorities have wisely accelerated their efforts to attract overseas capital with a view to achieving greater diversification of the economy. A number of new industrial ventures have been commenced, and there is a movement to raise agricultural production by the provision of facilities for large scale plantations.

Trade was maintained at a high level during the past year resulting in a favourable balance of £35,300,000 on visible account, which is a considerable achievement.

The action of Government in raising sharply the rates of minimum wages at the lower levels must create some problems. Those responsible must surely realise there is a danger some of the development plans may well be frustrated as a result of increasing costs.

(*continued overleaf*)

BALANCE SHEET, 31st MARCH, 1955

LIABILITIES

	£	1954 £
CAPITAL—		
Authorized 400,000 Shares of £10 each	4,000,000	4,000,000
Issued 300,000 Shares of £10 each, £4 per Share paid up	1,200,000	1,200,000
RESERVE FUND including Share Premiums £400,000	1,400,000	1,200,000
BALANCE OF PROFIT carried forward	127,690	105,416
	2,727,690	2,505,416
CURRENT, DEPOSIT AND OTHER ACCOUNTS, Provision for Taxation on the Profits to date and Inner Reserves	78,823,505	79,435,310
SECOND INTERIM DIVIDEND, less Income Tax	48,300	—
PROPOSED FINAL DIVIDEND, less Income Tax	—	46,200
LIABILITIES ON ACCEPTANCES, CONFIRMED CREDITS AND OTHER ENGAGEMENTS ON BEHALF OF CUSTOMERS	10,294,723	9,646,440
NOTE: Balances in West African Currency have been converted at par and Foreign Currencies at rates ruling on March 31, 1955.		
	£91,894,218	£91,633,366

HARLECH
E. WHITLEY JONES } *Directors*
W. F. BECKER

ASSETS

	£	£	1954 £
CASH IN HAND AND IN TRANSIT AND WITH BANKS AND AGENCIES		10,304,858	6,028,782
MONEY AT CALL AND AT SHORT NOTICE		22,500,000	25,825,000
BILLS OF EXCHANGE:	£		
Treasury Bills	21,505,000		21,040,000
Other Bills	763,373		685,643
		22,268,373	
INVESTMENTS AT OR UNDER MARKET VALUE:	£		
British Government Securities	14,686,687		13,676,342
Other quoted Securities (Including Securities lodged with the West African Currency Board as Security for Currency issued to Branches)	150,483		150,483
		14,837,170	
LOANS, ADVANCES AND OTHER ACCOUNTS, less Provision for Bad and Doubtful Debts		11,428,742	14,430,720
		81,339,143	81,836,970
LIABILITIES OF CUSTOMERS FOR ACCEPTANCES, CONFIRMED CREDITS AND OTHER ENGAGEMENTS		10,294,723	9,646,440
PREMISES AND FURNITURE at cost, less amounts written off		260,352	149,956
		£91,894,218	£91,633,366

FRANK G. WRIGHT, *General Manager*
ALLAN WALKER, *Chief Accountant*

Profit and Loss Account for the year ended 31st March, 1955

	£	1954 £
RESERVE FUND	200,000	100,000
CONTINGENCIES ACCOUNT	—	75,000
INTERIM DIVIDEND, less Income Tax	19,800	19,800
SECOND INTERIM DIVIDEND, less Income Tax	48,300	—
PROPOSED FINAL DIVIDEND, less Income Tax	—	46,200
BALANCE CARRIED FORWARD	127,690	105,416
	£395,790	£346,416

	£	1954 £
BALANCE BROUGHT FORWARD	105,416	101,704
PROFIT FOR THE YEAR after providing for taxation thereon and after transfers to Inner Reserves, out of which provision has been made for diminution in value of assets	290,374	244,712
	£395,790	£346,416

DIRECTORS' REMUNERATION:	1955 £	1954 £
Fees	11,521	11,500
Other Emoluments, including provision for pension in another capacity	8,770	7,503
Pension for past services in another capacity	1,281	1,269
	£21,572	£20,272

REPORT OF THE AUDITORS TO THE MEMBERS OF BANK OF BRITISH WEST AFRICA LIMITED

We have obtained all the information and explanations which, to the best of our knowledge and belief, are necessary for the purposes of our audit. In our opinion proper books of account have been kept by the Bank so far as appears from our examination of those books and proper returns adequate for the purposes of our audit have been received from Branches not visited by us.

We have examined the above Balance Sheet and annexed Profit and Loss Account which are in agreement with the books of account and returns of the Bank. In our opinion and to the best of our information and according to the explanations given us the said Accounts give the information required by the Companies Act, 1948, in the manner authorized for a Banking Company and on this basis give a true and fair view, in the case of the Balance Sheet, of the state of the Bank's affairs at March 31, 1955, and, in the case of the Profit and Loss Account, of the profit for the year to that date ascertained in the manner therein indicated.

London, May 26, 1955.

PEAT, MARWICK, MITCHELL & CO., *Chartered Accountants, Auditors.*

GOLD COAST

The 31st July, 1955, marks a further important step forward towards self-government, for from that date the Civil Service in the Gold Coast comes under local control. Much has been done to recruit and train suitable officers from within the territory for Government service, but there will be a shortage of qualified and experienced men for many years to come and the Government is fully aware of its need to recruit from outside. Congratulations are due to Mr. Kodwo Mercer, formerly Chairman of the Cocoa Board, upon his taking up the duties of Commissioner in London.

The major event of the year has been the letting of the contract for the construction of the new harbour at Tema. The work is being undertaken by two English contractors jointly at a price of £7,500,000. The need for the facilities which the new Port will provide has become steadily more pressing, for the past year has brought many difficulties to merchants through delays in the landing of cargoes at Takoradi and at Accra.

Good progress has been made with the improvement and extension of roads, and work has commenced on an important new bridge crossing the Volta River at Adomi which will greatly facilitate trade with Togoland.

The cocoa crop has been disappointing in that the volume was scarcely better than that of a year ago. However, at recent world prices the value of the crop is again likely to exceed the cost of the whole of the country's imports for the year.

Timber exports have been good. Gold production has been at a higher rate than for some years, but the tonnage of manganese exported fell sharply. Output of diamonds fell slightly and although good prices were secured unstable conditions prevailed in the market. The opening of the Accra market created some uncertainty, while the tendency which was evident at one period for better quality goods to be sold locally, leaving the poorer qualities to be passed through the Banks, caused a distinct slackening of interest on the part of buyers in the principal world centres.

Encouragement of agricultural produce for export other than cocoa has continued, and the Agricultural Produce Marketing Board is now buying palm kernels, copra, and coffee. Coffee is coming forward, some kapok has been marketed and there have been better shipments of copra. Further assistance to the development of secondary industry has been provided by the elimination of Import Duties upon a variety of items required for building and manufacturing.

There were changes in the sources of imports. Purchases from the United Kingdom and from the U.S.A. were lower, more goods being taken from Belgium, Germany France and Japan. The total value of imports fell by some £2,500,000 to £71,300,000, the trend of prices being lower.

There has been some anxiety amongst those concerned with the Gold Coast regarding the declaration in the C.P.P. Election Manifesto to establish a separate currency. The Finance Minister has made a timely statement of the Government's intentions. It is proposed to introduce a new currency some time after 1956 which will be exchanged and maintained at a value equivalent to that of the pound sterling. The new currency will be fully backed by sterling, and its production and control will be Government's sole responsibility.

Over and above her dependence upon overseas trade, the Gold Coast will have for many years a great need of overseas capital. A sound currency is vital to her well-being, and she cannot do better than remain linked to sterling.

SIERRA LEONE

There has been marked progress in the field of local Government. The extension of civic responsibility should produce a body of candidates for Legislative Council capable of providing responsible representation at the highest level and resulting in a closer understanding of interests between the peoples of the Coast and of the Interior.

Road development and bridge construction, the provision of water and electricity supplies, and the extension of social services is creating a total of recurrent annual expenditure which is as much as the budget can carry at present. Nevertheless, such progressive work has to continue, and every means must be pursued to extend the country's trade and commerce which will naturally benefit the Treasury's revenues.

It is a disappointment that the bauxite deposits have been found commercially unworkable. The Government should reach early agreement with mining interests for the exploitation of the iron ore deposits at Tonkolili.

The rapid growth in illicit traffic in diamonds which has taken place during the past twelve months seriously imperils the whole economy of Sierra Leone. Apart from the loss of revenue, it is attracting young men away from the land, and essential food production has been neglected to the extent that considerable imports of rice have had to be made. The Conference held to deal with the problem of illicit diamond winning apparently failed to find a solution, and it seems to be very necessary that a scheme of a realistic nature should be produced as quickly as possible to meet the situation.

The volume of palm produce has declined further although the Marketing Board has maintained prices at the expense of its reserves. Coffee shipments have grown to sufficient importance to be brought under Produce Inspection rules. The ginger crop has been poor.

The budget position is at present satisfactory but Sierra Leone has several major problems to solve if she is to ensure the revenues which she requires.

THE GAMBIA

The Gambia's finances have improved considerably and the prospect is definitely healthier than it has been for several years.

The new power station supplying electricity for Bathurst is coming into operation, and further valuable improvements have been made to wharf facilities up-river.

With her budget estimates at no more than £1,500,000, the Gambia cannot embark upon grandiose schemes for development. Nevertheless she is making praiseworthy endeavours to secure improvements in her economy.

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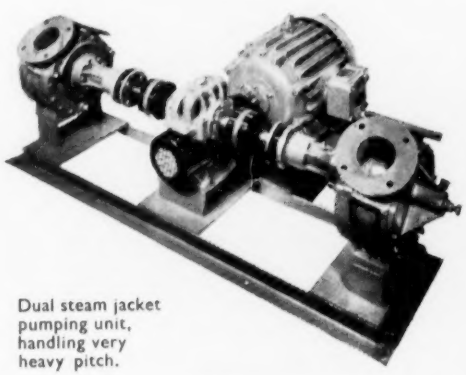

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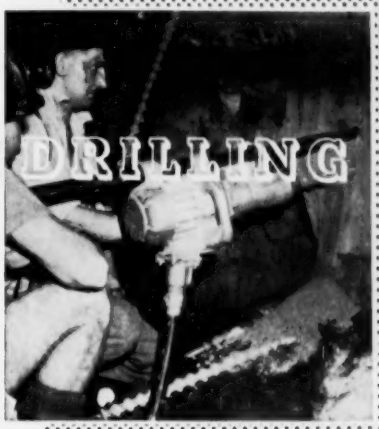

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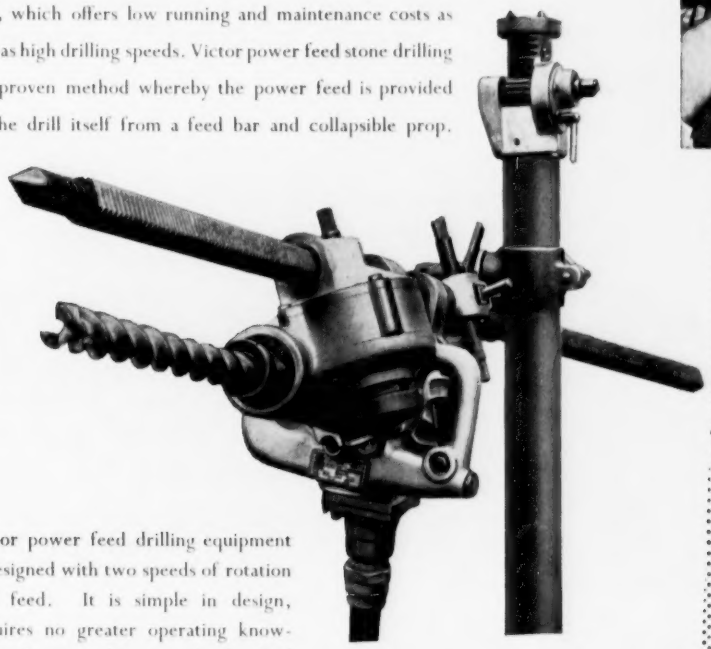

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i

ii

iii

i *Light quick setting prop can be adjusted in a moment.*

ii *Feed bar held in position by quick release ratchet. The time saved on rigging is the time saved on drilling.*

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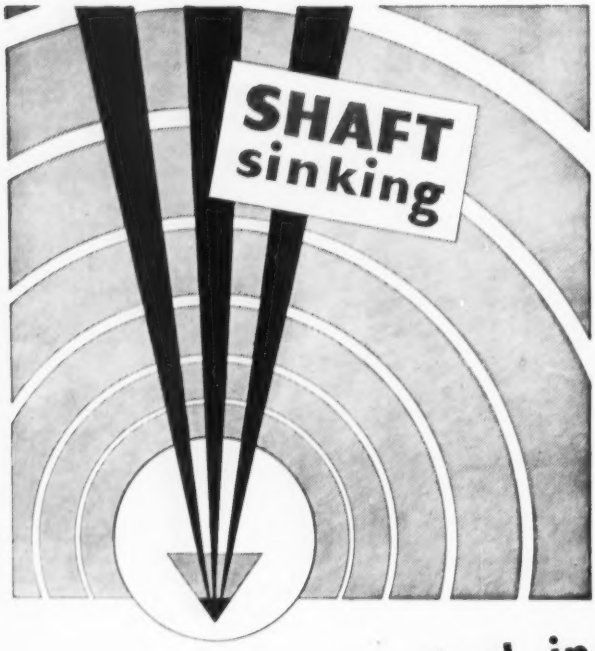

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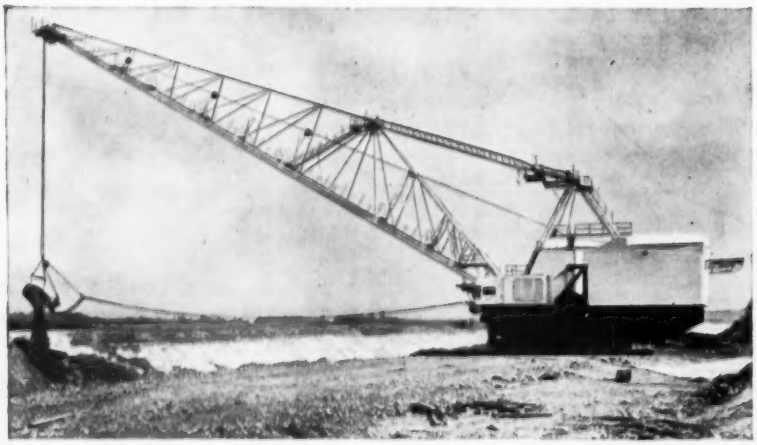

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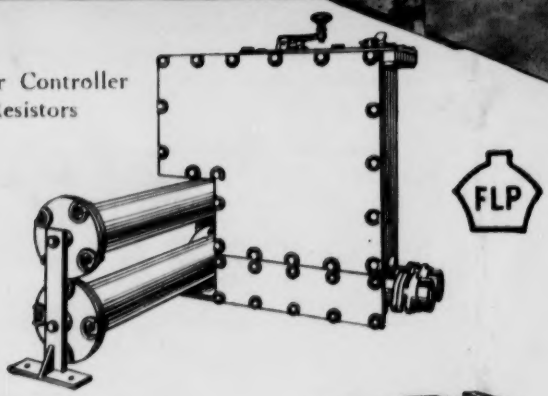

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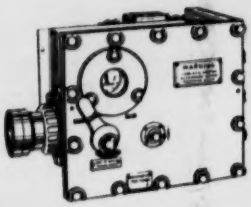

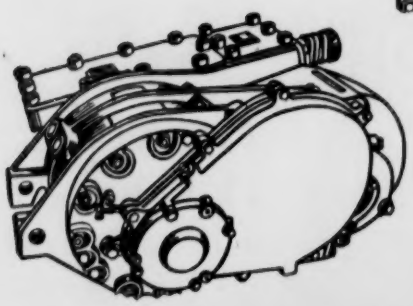

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